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ABSTRACT

A study of student skill levels and remediation needs was conducted at Grande Prairie Regional Collage (GPRC). The study involved: (1) a survey of the literature on the underprepared learner, basic skills, remedial and developmental education, learning skills centers, assessment and placement, attrition, faculty development, and program evaluation; (2) an assessment of the skill levels of entering freshmen in the areas of mathematics, reading comprehension, vocabulary, and reference skills; (3) site visits to learning assistance/skill centers at 11 other postsecondary institutions; and (4) the development of recommendations in response to identified student problems (i.e., student failure, student attrition, lack of time for instructors with already heavy course loads, lack of support and remedial materials for college students with skill deficiencies, lack of support for high risk students, lack of short-term assistance, limited support services in study skills, no established skills center, and the lack of an inclusive skills assessment program. This section is followed by a glossary and an extensive bibliography. The bulk of the report consists of appendices providing data from the assessment of student needs, task force information, detailed information on the postsecondary schools visited, evaluation procedures, and information on the cost and staff requirements of the recommended skills center. (AYC)

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Institutional Response to Student Skill Needs at Grande Prairie Regional College

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JC 850 247

This copy includes changes made at the Academic Council meeting on May 6, 1985.

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I. INTRODUCTION AND PURPOSE

A. Introduction

That college freshmen "lack adequate academic preparation" has been a cry for many years. "Ever since Francis Wayland at Brown University complained to the Trustees in 1841 about the poor ability of entering freshmen" (Rudolph) the cry has continued. It is very apparent that even though the students have the paper credentials, many have skill deficits that negatively affect their chances for academic success in college.

As Grande Prairie Regional College administrators and faculty have become increasingly concerned about student's preparation and the fact that we may be "unintentionally setting up some students for failure", a number of actions have taken place, part of which has resulted in this study.

B. Purpose

The purpose of this study was: to conduct a needs assessment of incoming first year students to determine, through testing their skill levels in the areas of mathematics, reading comprehension, vocabulary, and reference skills; to visit learning skill centres in other institutions; to conduct a survey of literature; and to make recommendations for an institutional response to meet the needs of our students.

II. SURVEY OF LITERATURE

A. Introduction to Survey of Literature

In the following survey of literature, the areas covered are the underprepared learner, basic skills, remedial and developmental education, learning skills centres, assessment and placement, attrition, faculty development and program evaluation. As one reads the survey of literature it is important to keep in mind that the literature surveyed is American in origin for there is very little Canadian literature available on these topics; also American Colleges are faced by an open door mandate.

B. The Underprepared Learner

In understanding what an underprepared student is, it is helpful to see how literature describes a prepared college student.

Round states that the prepared student has: a willingness to study hard, the ability to solve personal problems, high goal aspirations, involvement in school activities, completed orientation, a feeling of support from significant others, motivation, persistence, and accepts responsibility for his/her own learning.[1]

The prepared college student, as described by the Tennessee Higher Education system, is a student who has a basic understanding of intelligent adult behavior, knows basic structure and tenets of citizenship, has an awareness of self in place and time, a knowledge of the diversity of world cultures, speaks acceptable English, can do every day calculations, possesses reading skills required to read materials intended for general circulation, and has a basic writing competency.[2]

In contrast, the underprepared learner is identified as having: a poor self concept, previous education experiences that were negative and defeating, a poor clarification of life goals, unrealistic goals, difficulty in performing traditional educational tasks, low motivation, poor writing and speaking skills, poor reading skills, weak or negative study habits, low math skills, attendance problems, low income, and inappropriate adaptive behaviour.[3]

Miller states that the underprepared learners have little confidence in their ability to learn new tasks, that they will not be inclined to take advantage of college support programs and services, that they avoid participating in learning experiences that have been associated with failure in the past, and tend to participate only in activities in which they feel assured of success.[4]

Round indicates that underprepared students feel worthless and helpless, have poor mental health and have poor problem solving skills. He also states that they have unrealistic levels of aspiration with inappropriately high or extremely low goals, that they exhibit less social maturity and autonomy, have inappropriate adaptive behavior and see themselves in negative terms.[5]

Thornton states that though their previous education has been degrading and defeating, the student feels that economic competence comes through achievement in education and the student demands that schools reexamine their practices and provide meaningful access to economic reward.[6]

Martin describes the underprepared learner as being unsure of what to expect in college, mistrustful of counsellors and believing himself/herself as a failure but wanting one more chance to try.[7]

Arwardy divides the underprepared learners into three basic types: the resilient learner, the reluctant learner, and the naive learner. Resilient learners have limited skills but have confidence in themselves to master the necessary skills. The reluctant learner has limited skills but has a negative self-image. The naive learner has limited skills but has a false notion about the skills he/she possesses.[8]

Young states underprepared learners usually come from one parent families that are poor and read at least three years below their grade level meanwhile the women are more likely to drop out than the men, as are the older students even though they get better grades and are more satisfied with college life.[9]

Sims says that underprepared students have a poor concept of time, inadequate notetaking skills, difficulty in following directions and deficient reading, vocabulary and writing skills.[10]

Davies states that the underdeveloped learner believes that you either have the basic skills or that you get them through experience, that the students find it easier to blame the system and the instructor than to improve their skills, that they may not know where the resources for help are, nor know how to use them and that they won't ask instructors for help because they are in awe of them.[11]

Marshall indicates that underprepared students function better when support services are available for both academic and personal needs and stresses that they need to learn how to use and benefit from these services.[12]

The underprepared learner may also be referred to as a high risk student, an underachieving student, a disadvantaged student, a non-traditional student, an academically deficient student, or an unskilled learner. To meet the needs of the underprepared learner, colleges have established a variety of basic skills, developmental and remedial programs.

C. Basic Skills/Developmental/Remedial Education

Competency in basic skills is necessary for success at college. Numerous articles have been written regarding students who are lacking the basic skills, that are enrolled in college. The basic skills are identified as reading, writing, mathematics and study skills.

Jacob states that:

> Within recent years there has been a great deal of discussion concerning the proficiency of today's students in the basic skills of reading, writing and mathematics. Many secondary school teachers, university faculty and members of the general public believe that the students today are less literate than they were twenty years ago.[13]

Miller indicates that 50% of all freshman students are deficient in one or more basic skills.[14] At the University of New Mexico, Minnick found that 60% of all freshman were required to take one or more basic skills courses.[15]

To enable students lacking one or more basic skills to successfully complete their college program, there has been a proliferation of courses designed to help the students overcome these deficits. The programs fall into either basic skills courses, remediation courses or developmental courses and are offered by a variety of programs or departments or college.

Rouche states:

> "By the late 1960's, the most offered courses in American community colleges were remedial reading, remedial writing and remedial arithmetic. As many as 50 percent of any entering freshman classes were found in need of essential remedial work"[16]

Basic skills are academic skills which are normally acquired in the elementary, junior and high schools that are necessary for success at college. Remedial instruction refers to information and help given in skill areas where the skills are below the basic skill level, to enable the student to make up these deficiencies. It is a short-term product oriented process.[17] Developmental Education is a process whereby students learn through a series of stages whereby students are enabled to develop their learning skills.

The difference between remedial and developmental education lies in the emphasis. Assumptions made in remediation include: 1) poor performance results from deficiencies within the student, 2) remediation is preparatory and 3) remediation is a once and for all solution. Developmental education that assumes learning occurs through a series of stages, that learning occurs as individuals interact with environment, encounters new stimuli and incorporates this information and that growth varies from individual to individual.[18] In developmental education it is felt that academic performance is a procession of stages, no stages may be skipped, each stage is more complex than the previous one and that learners interact with instructional materials at their own levels.[19]

Remediation for remediation's sake does not work.[20] The time honored way of handling deficiencies is to delay entrance into regular classes by shunting students into remedial courses. Often remedial courses are viewed by students as penalty boxes. Remedial courses do not prepare significant number of students for performance later on in college level courses. They are expensive exercises in futility.[21]

Keimig states that generalized remedial courses are less likely to be effective. Remedial courses do not foster problem solving and course information is not transfined to other courses.[22] Bray also feels that heavy remedial doses in the long run do not remediate and that the single remedial course, which is the least effective, is still predominant.[23]

Roueche indicates that the success of early remedial efforts in community colleges was marginal at best. Few early students completed the class and in some cases as many as 90% of all remedial students either failed or withdrew.[24]

Remediation courses are not seen as valid courses by the students. They resent being identified, and students feel that the courses lead to nowhere. Remediation is expensive in terms of both time and money.

Most remedial courses are taught by the lecture method which is one of the least effective methods of teaching for remedial students. The students are enrolled in remedial courses that put them into a particular track to prepare them for regular college classes. The results of several studies pertaining to the effectiveness of the "tracking approach" indicate that:

1. student achievement in remedial courses has not resulted subsequently in improved performance in regular college courses;
2. student and institutional retention is very low in remedial programs;
3. enrollment in remedial courses has a highly adverse effect upon the student's self-concept, as well as upon his motivation for learning.[25]

Hollingsworth states that remedial courses are not designed to fill information gaps or help students to quickly gain cognitive skills.[26]. However, remedial courses can be successful if a number of conditions are met.

Roueche feels remediation can be successful if the following conditions are met: that the faculty who teach remedial courses volunteered, that there is a hands on approach and not a lecture situation, that the programs are tied to students learning successes in comparison to the "right to fail policy", that there is an assessment of academic skills to properly place the student (the open-door policy does not mean open access) and that success in programs is documented.[27]

Myers states that remedial programs can be beneficial if there is instruction by enthusiastic and committed instructors, individual attention is provided, instructors have additional training in developmental education, students are trained to be independent thinkers, there are necessary support services, use of peer tutoring and C.A.I., and continual evaluation of programs.[28]

Keimig describes successful programs as those that are comprehensive which include emphasis on the individual, there is flexibility in presentation of materials to meet students, that support services are available and the programs are student oriented and institutionalized (which means that programs are integrated into the academic and social mainstream and programs are given status and importance) that the administration demonstrates commitment to the program, that there is a good working relationship with academic faculty and that there are clear goal statements.[29]

Rounds suggests that remediation can be beneficial if: (a) there is student involvement in diagnosis of their lack of skills, (b) classes are combined with a tutoring and counselling component (c) lecturing is replaced with a number of other teaching methods.[30]

Chausow indicates that remediation does not have to come in the form of segregated remedial courses. He feels that remediation can be successful if it is carried on as a support to regular programs, if mastery learning principles are utilized, if there are well planned and prepared supportive materials, if there is a cooperative staff effort and if computer aided instruction is utilized.[31]

Chauson also states that:

> "Nowadays many adults, young and old, want a college education. Whether they elect baccalaureate or career programs, these students deserve to be given the opportunity of a college career without being side tracked. Edward B. Fishe, education writer for the New York Times, neatly summed up the issue of remedial versus "regular" instruction in a recent article on mastery learning techniques when he stated, '...given enough time and the right learning exercises, just about every student can learn what a teacher has to offer.'"[32]

D. Learning Skills Centre

Learning skill centres began to appear in the late sixties and early seventies. Very few post secondary institutes do not have some type of a learning skills centre.

In a report of the American National Institute of Education, a learning skills centre is described as "a special location where students may come, be sent, for special instruction not usually included in "regular"college classes."[33] Sullivan describes a learning centre as "a unit, program or facility specifically designed to help students develop or refine those learning skills requested for academic success."[34]

Operationally, learning centres vary in name, function and administrative location. A learning skills centre may be located in regular college departments, continuing education, learning resources centres, general studies counselling, student services or may report directly to a vice president of the college. The names of learning centres vary from "Learning Centre" to "Personalized Achievement Lab" to "The Bridge" - to acronyms such as L.A.C., L.S.C., and C.A.R.[35,36]

Although the function of a learning centre varies from institution to institution there is a commonality between all in the fact that "they seek to limit unnecessary pupil dropouts, enhance learning skills, minimize the trauma of academic failure, ultimately improve the academic performance of their students and more important, provide learning opportunities for the handicapped to get into the mainstream of higher education."[37] Lauridsen states that while learning centres "all share the common goal of assisting students to become more efficient and effective learners", the function may vary from providing for all nontraditional academic activities to those concerned primarily with basic skills.[38]

Learning skills service may include "tutorial assistance in content fields; learning skill development; instructional resources, including educational technology; and instructional development for faculty and staff."[39] Kay indicates that learning centres deliver services through activities in sub-programs such as learning labs which contain reading, math and basic skills components.[40]

Learning assistance services as identified by Frank Christ, include individual programs in personal learning skills for all students, faculty and staff, course support programs, program development and facility support for staff development, tutorial clearinghouse for students, individualized programs for students, staff and faculty to prepare for standardized tests, consultative service to faculty in the development of self-paced learning packages and courses as well as contact programs in learning assistance, personal learning skills workshops, behavior modification, (including biofeedback and desensitization services for students in cooperation with the educational psychology department and the counselling centre) and personal learning skills workshops.[41] Learning skill centres may offer assistance in reading, writing, mathematics, study skills, E.S.L., and in the development of a positive self concept and positive mental attitude.[42], [43], [44], [45], [46] The National Institute of Education indicates that learning skills provided by learning centres include: reading for both comprehension and speed: writing for fluency, organization and mechanics: effective studying, for listening, notability, outlines and test taking: and sometimes speaking, for confidence and coherence. Learning skills can be quantitative as well as linguistic with many centres offering help in elementary mathematics.[46]

The methods of instruction employed include: tutoring, peer tutoring, one-on-one instruction, workshops, classes, weekly conferences, student-teacher contracts, programmed material and audio visual progams including C.A.I., videos, and cassette recorders. The very least effective method of presentation is the lecture method. Students were more successful if the method of instruction was flexible and included contact with either instructors or tutors and audio-visual equipment.[47], [48], [49], [50], [51], [52] (A "hands on" approach to learning new skills is very important.)[53]

Enrollment in learning assistance programs may be either voluntary or mandatory. Friedlander indicates that mandatory enrollment is the most effective. Students who need help the most are the ones least likely to go voluntarily for help.[54] Roueche suggests that mandatory counselling and placement are important elements in successful learning skills programs.[55]

E. Assessment

Institutions can no longer solely rely on a student's high school grade point average as an adequate predictor of sucess in college. Many colleges have added a further dimension of assessment testing.[56] In fact, Roueche states that "many institutions make testing and subsequent placement conditions for enrollment."[57]

Assessment tests identify students with low skill areas, provide diagnostic information on low skill areas and indicate placement levels. Roueche indicates that many institutions require mandatory assessment and placement of students.[58] Roueche and Armes recommend that all entering students be assessed using an assessment package containing tests of reading, verbal skills and math proficiency, a self concept indicator and a study skills inventory.[59] Wright also recommends assessment testing of all incoming students.[60] Roueche and Armes state that a battery of tests give a clear picture of a student's skill which will help faculty advise students regarding programs which would help them most.[61] Callas suggests that assessment of students should include aptitude and placement tests, interest inventories, previous educational records and interviews.[62]

Wright, in discussing Delgado Community College states, "Delgado began to require all entering students to take a battery of placement tests in the three R's. Armed with faculty-interpreted results, advisers were then responsible for urging students needing remediation to sign up" for help.[63]

Post secondary institutions use a variety of assessment tests. Rounds found that of institutions surveyed; 56% used a standardized test, 41% used Nelson-Denny and that 51.8% also used a locally designed test.[64]

It is important that the results of assessment tests be fed back to the students. Rounds felt that "the common practise of using a general ability test, with minimal feedback to the student, seems a waste of time" for both the student and instructor. When students have solid information about their skills and how they compare with class expectations, they tend to choose courses more wisely.[65]

Assessment tests give information that allow students to be placed in programs in which they may function successfully and develop the necessary skills needed to function in regular college classes. Bray states that students who are assigned and placed appropriately earn higher grades than those not assessed and placed.[66]

Assessment is of little or no value if there are no services available to meet the needs of these students once their needs have been identified.

f. Attrition

"Attrition is a problem that plagues both the traditional and the nontraditional student."[68] Attrition in the two year college is greater than in four year colleges.[69] In the community college there is an approximately 50% attrition rate.[70] The attrition rate is the highest during the freshman year. Marshall states that in a study conducted by Cope & Hannah, there was approximately a 41% attrition rate before the beginning of the second year.[71] Rounds found that the highest amount of attrition occurs in the first weeks of school.[72]

Colleges that use assessment tests, improve their retention of students.[73] Students who are not assessed and placed appropriately tend to drop out of courses more than those who are assessed and placed.[74] Rounds indcated that about 30% of the dropouts can be identified at registration through the use of assessment test results, and previous school grade results, as well as informal indicators such as late registration, and indecision about a major and course selections.[75]

It has been found that "if a student fits academically, socially and motivationally into the college environment, he is less likely to dropout (sic), stop-out or transfer."[76] Ro[illegible] feels that many of the students may not have dropped out if they had received more personal attention during a critical time.[77] Many students drop out without consulting with either a faculty member or a counsellor.[78]

Prevention of attrition is more important than prediction of attrition. Means used to prevent attrition include a closer monitoring of incoming students, an early warning system and the use of intervention procedures.[79] Early identification requires close communication between instructors and counsellors. Indications for intervention include excessive absences, failure to produce written assignments and failure to produce acceptable levels of work.[80] A lack of social interactions with class members or an appearance of social isolation may also indicate a need for intervention. Intervention activities may include contacting absent students, setting up a tutoring service for them, having counsellors interview all first year students after the fourth week of classes, having support services available, and establishing discussion groups to develop significant relationships between students and staff.[81]

G. Faculty Development

Underprepared students present a challenge to the college community. The college commuunity, in general, is not prepared, intellectually or culturally to teach students who lack basic academic skills.[82]

College instructors have been successful in their own college experiences and as a result have never experienced the problems faced by the underprepared learners.[83] Instructors are often unaware of whom the underprepared students are and are unprepared by either training or attitude to help these students.[84] Instructors forget how complex their subject is to beginners in the program and the amount of time that is required to learn the analytical and critical thinking process.[85] There is also the belief that basic skills should not be taught at the college level.

There is a general lack of training on how to teach basic skills.[86] Few colleges offer training on how to teach and work with underprepared students.[87] Many instructors are not aware of how to teach learning skills and are not prepared to cope with the extreme diversity of students in their courses.[88], [89]

Instructors who have the assignment to teach basic skills "tend to be from the lower and least experienced faculty rank or are graduate assistants.[90] Institutional support for basic skill courses is usually low. There is a low status attached to the programs.[91], [92] There is a general lack of understanding of the underprepared students learning skills and a negative reaction towards these student's.[93] Many instructors consider the task of teaching the underprepared learner as academic social work, and see it as an option until they can move up to "real classes". Instructors, on the whole, much prefer teaching the academically successful and motivated student.[94]

Instructors tend to offer courses in areas with which they are most comfortable and to use methods of presentation that were modelled by their instructors.[95], [96] Instructors most often use the traditional lecture method, along with competitive testing and grading and research papers which provide little help to the underprepared student as is evidenced by the high failure and dropout rate.[97]

In teaching the underprepared student, Fitts states that human involvement is the key to success or failure. Students learn more if they feel that the instructor is easily accessible, interested in teaching them and interested in them as individuals.[98] Chausow indicates that instructors "must learn to state course objectives clearly and design meaningful experiences that give students practice in the behavior required for achievement of the objective."[99] In aiding the underprepared student, he states that instructors should: "1) make an analysis of student needs, 2) know the kinds of learning experiences that will maximize chances of success and 3) be willing to cast oneself into the role of manager and planner rather than imparter of information."[100]

Cooper states that teachers of underprepared learners need to: "1) have strong committments, 2) have a positive attitude, 3) have appropriate experience, 4) be a facilitator to help increase one's self concept, 5) to be trained as a counsellor or able to work closely with a counsellor and 6) have competence in working with the learning disabled." Hollingsworth feels that an instructor must: "1) believe in the educationability of the underprepared learner, 2) have a genuine concern for students, 3) have accessability to students, 4) have course conformity and 5) be able to work with students in teaching them basic class responsibility.[101]

Rounds states successful teachers to the underprepared are those who have volunteered to work in the program, who are highly competent in their subject area and are effective in their discipline as well as being humanistic and fair.[102]

Roueche states that it is important that faculty involved in teaching the high risk student be aware of the demands of the courses, have a willingness to meet these demands and believe that they can be met.[103]

To enable instructors to work effectively with the underprepared student it is important that they learn to identify the students, be aware of their needs and know how to provide help for them. To do so, requires ongoing staff development and in-service programs which may be carried out through seminars, workshops, video programs, training session and individualized programs that would be available to faculty members.[104], [105], [106]

H. Program Evaluation

Program evaluation is a basic part of the learning assistance program. Evaluation helps administrators and faculty determine if a program is worthwhile as well as being cost and time effective. There is no one evaluation program that can be successfully used to evaluate all learning assistance programs.

Keimig describes evaluation as a process of delineating, obtaining and providing useful information for judging decision alternatives. The evaluation of learning programs, according to Keimig, is based on four critical variables: (a)institutional context and outcomes,(b) student outcomes,(c) academic standards and the grade point average and (d) a continuing on going evaluation.[107]

Dumont indicates that no single evaluation design may be employed to show program effectiveness or ineffectiveness. Evaluation needs to contain multiple indicators, to use comparison groups and to use short and long range measures that include attitudial as well as performance aspects.[108]

McFadden suggests that program evaluation is an integral part of a program, for it is used to improve and alter intervention strategies and to improve services. In evaluating a program it is important to have a standardized management and information system. He indicates that enrollment data, admission characteristics, student performance in the program and in outside classes should be included in the process.[109]

Minnick states that retention statistics and academic progress of student be considered in the evaluation process.[110] TheIllinois Community College Commission uses student evaluation, faculty evaluation, student follow-up studies, college program review processes and external peers (visiting teams) in the evaluation process.[111]

Hollingsworth states that a variety of factors need to be considered when a program is evaluated. The specific areas include: (a) a reading grade level improvement of 1.4 to 2.3 grade level equivalent, b) a 70% retention rate in the program, (c) a five point improvement in math scores and (d) sufficient improvement in writing samples to allow the student to progress to the next level.[112]

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III. PROCEDURES

A. Task Force

A task force composed of staff, student, and public school representatives was established whose mandate was to:

(A) Determine the learning needs of the G.P.R.C. student, based upon needs assessment;

(B) Ensure the awareness of the general community to student skill deficits here based upon local data, e.g. prototype intake assessment, random assessment of returning students;

(C) Design strategies through research, conferences, visits, etc. appropriate to our unique population and resources;

(D) Develop an overall proposal by mid-January, 1985, in time for consideration in the 85/86 budget for implementation September, 1985.

The members of the task force were:

Member	Position	Department
Olga Anderson	Chairman	Learning Resource Centre
Cindy Carter	Instructor	Early Childhood Development
Leo Dawson	Instructor	Administrative Studies
Barry Edgar	Principal	Grande Prairie Composite High School
Joy Gurnett	Student Government Representative	
Don Hall	Director	Student Services
Doreen Lakusta	Instructor	Academic Development
George Hanna	Instructor	University Transfer
Laverne Larsen	Counsellor	Student Services
Janet Longmate	Chairman	Human Development
Loya Stonehocker	Research Consultant	Student Services

B. Data Base

Population

The population for the data base was selected from incoming first year students who were registered for the Fall 1984 college term. Three hundred and fifty students were randomly selected. Letters were sent to the students asking that they write the series of tests in September, 1984. Two hundred and ninety two test results were obtained.

Testing Procedures

The tests were written in the college gymnasium. Academic Development students wrote a block of tests from 10 a.m. to 11:30 a.m. The remainder of the students were divided into two alphabetical groups. A through K wrote from 12 to 2 p.m. and L through Z wrote from 2:15 to 4:15 p.m. The Academic Development students had a shorter test time as they had written the Nelson-Denny reading component previously as part of their required placement test.

Tests

The tests selected for use were the Canadian Achievement Test level 19 and the Nelson-Denny - Form C. The skill areas tested included mathematics, reference skills, and reading.

The Canadian Achievement Test was used to test mathematics concepts and application and reference skills. The mathematics area measured specific skills in the understanding and application of mathematical concepts. The test included items in number theory, number sentences, number properties, measurement, geometry, functions, graphs, problem solving, rounding and estimations. Reference skills measured the students' information-gathering skills. The students were given reference materials from dictionary pages, maps, library catalogue cards, forms, diagrams and information based upon the Canadian Periodical Index and then asked to answer questions from the information provided.

The Canadian Achievement Test - Level 19 gave grade level equivalents up to and including grade 12.9 which would be the theoretical level for incoming first year college students.

The Nelson-Denny - Form C test measured reading comprehension, vocabulary and rate. Greatest emphasis was placed on the comprehension and vocabulary results with very little emphasis on the rate results. The test gave grade equivalent results up to and including grade fifteen which would be the equivalent of third year college.

General Information

- Student results came back in percentages, stanines and grade equivalents.

- Local normals were established for the Canadian Achievement Tests.

- Cut off scores were arbitrarily set by the researcher for high and medium risk indicators.

- Students testing 1.5 to 2.99 grade levels below entrance requirements were considered medium risk.

- Students who scored 3 or more grade levels equivalents below the entrance requirements were considered "high risk" students.

- Entrance levels for each department were considered as well as the general subject areas presented. For example math scores were given much more emphasis in engineering, science, etc. than they were in visual and performing arts, office administration, etc.

- In all areas combined there were 48 high risk students or 16% of the population while there were 49 medium risk students or 17%. There was a total of 33% "risk" students.

- In Academic Development there were 57 test scores. Fourteen students (25%) were identified as high risk students in either Math or English and twelve (22%) were identified as medium risk students.

- Administrative Studies had forty-one test results of which eight (20%) were considered high risk and eight (20%) were considered medium risk students.

- There were seventeen test results in Humanities and Social Science of which two (10%) were identified as high risk and two (10%) as medium risk students.

- Visual and Performing Arts had fifteen test results, of which two (13%) were considered high risk and four (26%) as medium risk students.

- There were ten test results in Computer Technology. Two (20%) students were identified as high risk and one (10%) as medium risk.

- In Athletics and Physical Education there were twelve test results of which one (8%) student was considered as high risk and two (16%) students were considered medium risk.

- Office Administration had a total of thirty test scores. Five students (17%) were identified as high risk and six students (20%) were identified as medium risk.

- In Early Childhood Development there were four test results. Due to the smallness of the sample the results do not necessarily represent a good cross section of the student population in that area. Two students (50%) were identified as high risk.

- Nursing Education had fourteen test results of which one student (7%) was identified as a medium risk.

- There were forty-seven test results in Science. Six students (13%) were identified as high risk and six (13%) were considered medium risk.

- In Education there were twenty-six test results. Five students (19%) were considered high risk and six (23%) as medium risk students.

- There were nineteen test results in Engineering of which one student (5%) was identified as high risk and one (5%) as a medium risk student.

Test Comparisons

A comparison was made between comprehension and vocabulary test results of the Nelson-Denny - Form C and the Canadian Achievement Test.

Seventy-five students were randomly selected from the two-hundred and ninety-two students who had written the first set of tests. Letters were sent to these students asking them to participate in a comparison testing for the Nelson-Denny test. Fifty students wrote the reading comprehension and vocabulary areas of the Canadian Achievement Tests.

C. Post Secondary Institutions

A description of post secondary institutions visited by Members of the task force between May 1984 and January 1985.

1. Alberta Vocational Centre - Calgary

The Alberta Vocational Centre is located in downtown Calgary. The Learning Assistance Centre is located on the fourth floor, directly behind and joined to the Learning Resource Centre.

The L.A.C. has a coordinator who reports to Student Services. There are five fulltime staff members (one of which is the coordinator) and one instructional aide. The centre has a strong peer tutoring program. The centre does not have a secretary-receptionist.

The mandate of the Learning Assistance Centre is to help students increase academic success by assisting in the development of learning skills and systematic approaches to the acquiring of knowledge and abilities thereby facilitating a student's cognitive and social development.

The programs offered include mathematics, reading, study skills, writing and English as a second language. There are workshops, individualized programs, small group classes, one on one instruction, peer tutoring, video and computer programs available.

The centre is open weekdays from 8 to 5, with instructors available. After 5 p.m., the centre is kept open for student use with Continuing Education. The Learning Resource Centre provides a resource person to find programs and to help with the equipment.

Students using the Centre may come as a referral from an instructor or counsellor, may be drop in students, may be students referred or a one time basis, or may be pre-entry students.

The centre presents workshops to specific classes as requested by instructors, as well as an enrichment program that is available to the public for a minimal tuition fee.

2. Grant MacEwan College

Grant MacEwan College is located in Edmonton, Alberta, with two campuses: Millwoods and Jasper Place.

There is a learning assistance centre on each campus. There are three fulltime academic staff members (one of whom is the section head), two instructional aides, and one secretary-receptionist. The section head reports to Academic Services.

The Learning Assistance Centre is open Monday through Friday, from 8:30 to 4:30. The centre offers assistance and programs in mathematics, reading, study skills and writing. The centre utilizes computer and video programs as well as workshops, small group instruction and individualized instruction. The centre does not operate a peer tutoring program.

3. Lethbridge Community College

The Lethbridge Community College is located in Lethbridge, Alberta. The learning assistance centre at L.C.C. is called "The Developmental Skills Centre."

The mandate of the Centre is to assist the underprepared student to function successfully in regular college programs. The Developmental Studies Centre has a coordinator who reports to the director of Business and Applied Arts. There are three full-time instructors (one of whom is the coordinator), one instructional aide and one secretary-receptionist. The Centre serves the whole college as well as providing outreach facilities to various agencies in the city. There is a close working relationship with college preparatory programs and the counselling area.

The Centre does skill assessment for college preparatory programs and for any other area that requests it. It provides inservice training for instructors requesting help in working with the underprepared learner. Help is provided in reading, writing, study skills and mathematics. (Some reading courses for credit are offered through the Centre). E.S.L. help and peer tutoring are not provided through the Centre. The Developmental Studies Centre presents information and help through the use of videos, computers, and other audio-visual equipment, as well as direct instructor help.

The Centre is open between 8 and 4, Monday through Friday. Continuing Education keeps the lab open from 4 to 7 p.m.

4. Mount Royal College

Mount Royal College located in Calgary, Alberta, offers both career programs and university transfer programs. The college has both a learning skills centre and a mathematics centre. The Learning Skills Centre reports to the English department. There are three fulltime staff members and a secretary-receptionist.

The centre offers reading, study skills, and writing help through small group workshops, one-to-one instruction in the labs, peer tutoring, and materials for independent use. Peer tutoring is offered through the centre in the following areas: accounting, anatomy, biology, chemistry, English, environmental quality control, geology, German, history, linguistics mathematics, nursing, pretroleum, philosophy, physics, political science, psychology, rehabilitation, social work, and Spanish.

The Learning Skills Centre is open Monday to Friday, 8:30 to 4:30.

5. Red Deer College

Red Deer College, located in Red Deer, Alberta has both career and university programs. A learning assistance centre was established in 1982.

The mandate of the Learning Assistance Centre includes: the providing of leadership in developing learning skills that are necessary for success in post-secondary education, maximizing the performance of students performing at an acceptable academic level, and providing academic support for underprepared students. It also lends support to classroom instruction in such areas as: diagnostic techniques; remediate material and references, and process intervention; helping students develop their self-concepts as learners; developing self-confidence and reducing fear of failure; and improving human relations and the sense of campus community among the students.

The Learning Assistance Centre was originally under Student Services but is now under a new division called Educational Resources. There is a co-ordinator who also is an instructor, one other academic instructor, one instructional aide, a secretary-receptionist and a number of part-time instructors. The Centre also uses peer tutors. The Centre offers some reading courses for credit. The programs include mathematics, reading, study skills, and writing.

6. Dawson College

Dawson College located in Montreal, Quebec, has learning centres on three campuses: Selby, Lafontaine and Viger. The Learning Centre is a unit of Student Services. There are four full-time academic staff members, one part-time academic staff member, two full-time and one half-time secretary-receptionist. There are sixty peer tutors.

The centres at Dawson College have three different emphasises. Vegir's main emphasis is working with the learning disabled. La Fontaine has a strong peer tutoring program where the tutors are given credit for tutoring. At Selby, the peer futors are paid for their tutoring with the user and the Students' Association sharing the costs.

The objective of the Learning Centres are to: provide corrective and developmental reading and writing programs, to provide a study skills program, to remediate specific reading difficulties, to help students develop a positive self concept, and to develop a positive attitude towards education. Activities are course content orientated.

The Centres offer programs in mathematics, reading, study skills, writing, E.S.L., reducing test anxiety, and preparatory arts and science. The Centres have a strong peer tutoring program. The Centres keep detailed records of students and the progress of students is tracked.

One to one individualized help is available. Also there are numerous self-help materials in the form of programmed texts, workbooks, and audio-visual aides available to students.

7. Fanshawe College of Applied Arts & Technology

Fanshawe College, located in London, Ontario, does not have a traditional learning assistance centre but has a Reading and Study Skills Centre and a Mathematics Learning Centre that both offer credit courses.

The Mathematics Learning Centre, which is beginning its second decade of operation, is open Monday through Friday from 8:30 a.m. to 5:00 p.m. and Monday through Thursday from 7 to 10 p.m. The centre operates on a twelve month basis.

The Centre's staff consists of one coordinator, three faculty, two technologists and one technician. Serving on a part-time basis are six faculty, two technicians and one clerk.

The students using the Centre include about 30% doing remedial or upgrading work while the remaining 70% include those taking credit courses in continuing education, apprenticeship mathematics courses, mathematics courses for industrial craftperson programs, general math credit courses for general arts and science students, mathematics anxiety counselling programs, and mathematic support programs for other college operations and programs.

Students pay a book deposit which is partially refunded at the end of the course.

The Reading and Study Skills Centre gives credit courses in reading and study skills. All students entering Fanshawe College are required to write the Davis Reading Test. It is suggested that all students scoring below stanine 3 (approximately grade 9) take an upgrading course in remedial reading.

Students are further assessed by the Iowa Silent Reading Test A.M. and by an autobiographical sketch of a student's reading habits before being assigned to a particular course. Depending upon individual needs, students are enrolled into a Three-week, 3 hours/week or a 3-4 hour/week course. Students do not have to pay an additional fee.

8. George Washington University

George Washington University, located in downtown Washington, D.C., serves the metropolitan area. The Reading Centre has been in operation for thirty years.

The Reading Centre provides individual diagnostic testing and tutorial programs for children and adults as well as classes for SAT preparation, adult reading and enrichment, study skills, effective writing, spelling, mathematics, and reading/study skills programs for ESL college students.

The fees depend upon whether or not an individual is enrolled at the University. For individuals not enrolled, the fee is $456 for a 6 to 10 week course. Workshops are presented as well. A verbal SAT preparation mini session for one-half day costs $15. The costs for a one semester intensive college preparatory program is $1500 (this program is the equivalent of six semester hours).

Applicants wanting to be enrolled at the Reading Centre are individually screened and counselled before enrollment to ensure appropriate placement. Students, upon completion of a program, receive a certificate.

9. Holland College

Holland College, a non-traditional, post-secondary institution, is located in Prince Edward Island. The college has a number of centres where programs are offered. These centres include Charlottetown Centre, Royalty Centre, Summerside Centre, and

Westisle Education Centre. The college also offers workshops and short courses in various other locations.

This post-secondary institution was established in 1969 with the mandate of providing competency-based individualized career programs that allow learners to progress at their own rate. The programs do not lead toward a University degree but are career oriented.

There are no traditional learning assistance centres at the college. Each career program has a specialized learning resource area that acts as a support area. This area contains resources of printed materials, audio-visual materials, and equipment that will facilitate a student's learning the necessary competencies.

Admission to the programs is determined by: 1) acceptable high school grades, 2) openings available, and 3) a personal interview that assesses an individual's personal characteristics in relation to the occupation being chosen.

Students, with the exception of those in culinary arts, pay a tuition fee of $520 plus the cost of books and materials needed in each program.

10. Howard University

Howard University, located in Washington, D.C., is an all Black university. The learning assistance centre's official title is The Centre for Academic Reinforcement but is referred to by the acronym CAR by both the staff and students. CAR is located on the first floor of Academic Support Building "B". The centre, which reports through the director to the Vice President of Academic Affairs, is not part of a college or department.

> The CAR is a University-wide service established by the Howard University Board of Trustees in 1974 to provide a program of transitional studies for the enhancement of mathematics, verbal and reading/study skills of college entrants who have been conditionally admitted by one of the undergraduate schools or colleges. In addition the CAR conducts mini-courses for all interested students and staff personnel, and on-site workshops in most of the schools and colleges of the University. The CAR is responsible to the Office of the Vice President of Academic Affairs.

The CAR program has five components which include: verbal, mathematics, and learning-study skills (instructional); computer concepts and counselling (support). Courses taught in the Centre include verbal skills, Basic Math I (arithmetic) and Basic Math II (algebra); learning-study skills and reading comprehension. Each course is worth three credit hours with the policies in each college or department deciding whether the credits may be counted. Students receive a grade of either S - for satisfactory, U - for unsatisfactory, or I - for incomplete.

The courses are presented in one hour classes three times a week. There are some small group instructions as well as one-on-one help that is provided by graduate assistants. Some C.A.I. is available which is used to supplement regular classes. C.A.I. is used primarily in the areas of verbal skills and mathematics. There are no special fees, for the program is covered under the regular tuition.

Students enrolled in the CAR usually come for one of three reasons: a result of being conditionally admitted (have low SAT scores or low high school grades) by one of the undergraduate schools or colleges, referral from faculty, or by self-admission. The centre is targeted to college freshmen but also serves upperclassmen and graduate students as well as university employees.

The staff is composed of thirty-three full time positions which include a director, an assistant director, three instructional coordinators, two competency concepts and counselling coordinators, twenty-two instructors, one administrative assistant, three secretaries, and six graduate assistants.

11. Seneca College of Applied Arts & Technology

Seneca College, located in the metropolitan Toronto area, has the following campuses: Newnham, P.E.A.R., King, Jane, Leslie, Lawrence, Sheppard, and Yorkdale. This report is concerned only with the Newnham and Sheppard campuses.

Newnham Campus

The Newnham Campus does not have a traditional learning assistance centre. Learning assistance is provided through the "Writing Clinic" that is part of the English division. The centre is funded as a cross campus facility. It is established in a classroom containing book shelves, tables, and chairs.

It is staffed by English/literature teachers on a basis of up to four hours per week using time left over from their regular teaching load.

Students are sent either by professional program instructors, English instructors, or come on their own. Students sign to come in at a particular time and may come as often as needed. A large number of the students have an ESL background.

Sheppard Campus

The Centre for Independent Learning, located at Sheppard Campus, provides post-secondary educational opportunities to people whose personal schedule makes it difficult or undesirable to attend regular, timetabled classes.

The individualized format allows the student to complete course objectives in a shorter or longer period of time than the traditional semester length. Students have a flexible, self-paced schedule for learning activities with day or evening access to both the Centre and to the teaching masters. Students arrange their own schedule, work at their own pace, and obtain credits for courses complete.

Of students enrolled, 49% read at the grade twelve level while 23% at read a grade 8.9 level or less. There are a large number of ESL students. All students take reading and writing tests and are required to take a writing course.

There is no traditional learning assistance centre. Counsellors from the Counselling Service provide study skills handouts, workshops, and help. There is a testing centre where all tests are written. Teaching masters provide individual help for students.

D. Readability of Textbooks

The readability of textbooks has long been a topic for discussion by educators. The readability grade level of a textbook may be defined as difficulty index assigned to written materials as the grade level in years and months at which a reader with comparable reading skill grade level designations could read the material at the instructional level. Students will have difficulty in adequately processing the textual information if they are assigned textbooks with a readability grade level higher than the students skill level and are given no additional help in decoding the information. In a study conducted in Utah, it was found that the readability grade levels of prescribed texts in three of five subject areas were consistently above the skill levels of students. (Stonehocker, 1982)

One quick method of obtaining an estimate of the approximate reading grade level of a textbook is through the use of the Raygor Readability Estimate. This formula was developed in 1976. The readability grade level is determined by the average number of sentences in three or more one-hundred-word passages and the average number of six or more letter words in three one-hundred-word passages.

It is importnat to note that readability formulas only give a grade level estimate based on sentence and word length. They do not measure conceptual load, concept density or syntactic complexity.

In an analysis of selected first year textbooks used in G.P.R.C. classes, it was found that out of thirty textbooks only four fell at the grade level area in which they were being used. The majority of textbooks were at the professional or post graduate level.

IV. RECOMMENDATIONS

The following recommendations were developed in response to the needs assessment survey of literature and information gained visiting other post secondary institutions and identification of following problems: student failure, student attrition, lack of time for instructors with already heavy course loads, lack of support and remedial materials for college students with skill deficits, lack of support for high risk students, lack of programs available for immediate short-term help for students, limited support services available in study skills, no established centre to act as a support in academic skills for students and instructors and the lack of an inclusive skills assessment programs.

A. Learning Skills Centre - Overall Considerations

1. A learning skills centre be established.

2. The total L.S.C. program be implemented over a four year period with the major emphasis in the first two years. It is important that sufficient funding be allotted at the outset so as to position the L.S.C. for success.

3. That the L.S.C. be targeted to the total campus body recognizing the special needs of the Human Development and Technical Programs.

4. The centre be established on the main campus but provide outreach services to other campuses through workshops, handouts and materials available to other centres, C.A.I. programs and testing services provided.

5. That the L.S.C. acts as a support service to the mathematics, reading and writing labs in Academic Development.

6. That the L.S.C. offers assistance in the areas of mathematics (and related subjects), reading, study skills, writing and E.S.L.

B. Assessment/Placement

1. All incoming students be required to take a standardized test and a written test.

2. That G.P.R.C. use the Canadian Achievement Test, level 19 (grade 12 or highest level) and a locally prepared writing test. An appropriate instrument should be developed to suit the specific needs of the technical and human development areas.

3. All incoming students be required to take a study skills workshop. Whenever possible the workshop be targeted to specific departments.

4. Students with skill deficits may be required to work on skill deficit area - but allowed to progress at own rate. As soon as they show mastery level of skill--no longer be required to work in that area.

5. Assessment testing and marking be the responsibility of the learning skills centre in close consultation with college departments.

C. Programs - L.S.C (See program definition in definition section.)

1. All incoming students may be required to take a study skills workshop which would be included in graduation requirements.
2. Programs offered in first three years are targeted towards the overall student population taking into account the special needs of the technical and human development programs.
3. Support programs are included for the learning disabled after the third year of operation.
4. Programs be provided free of charge to students who have paid tuition. A charge may be levied for textbook or workbook costs.
5. Peer tutoring will be offered in the second year.

6. Public may participate in L.S.C. programs or workshops upon receipt of a user fee.
7. Short term remedial programs will be available to support regular course offerings.
8. Rather than have regular term long remedial classes, students take regular classes, but as a part of regular class requirements come to L.S.C. for additional course support.
9. Departments, programs and divisions could consider curricular modification (streaming) and preparatory programs (summer, restricted course loads, etc.)
10. Programs be offered in areas of:
    1. Mathematics
    2. Reading
    3. Study skills
    4. Writing
    5. E.S.L.

    Areas 1, 2, 3, and 4 be emphasized the first year.
    Area 5 to be added to 1, 2, 3, and 4 in the second year.
    (This is not intended to replace Academic Development or Human Development programs.)
11. Basic E.S.L. support through the use of C.A.I. will be available.

D. L.S.C. - Program Implementation

First Year: Staff - 1 full-time academic staff member
2 instructional aides
1 secretary-receptionist

Program Offerings: Study skills
Reading
Mathematics
Writing

Activities: Set up basic programs
Order supplies, materials, equipment
Organize L.S.C. facilities
Present workshops and mini-programs
Carry out "selling campaign"
Assess incoming students
Provide assessment feedback
Interface with college community
Implement C.A.I. and video programs

Second Year: Staff - add 1 full-time staff member

Programs Offerings: Study skills
Reading
Mathematics
Writing
E.S.L. component

Activities: Add depth to established programs.
Set up peer tutoring/tutoring program.
Train tutors.
Add E.S.L. Component.
Evaluate programs/change as necessary.

Third Year: Staff - add 1 full-time academic staff member (Should have staff with specialization areas so that the writing, reading, math and E.S.L. are represented)

Programs Offerings: Add depth and breadth to previous programs.

Fourth Year: Staff - add 1 full-time academic staff member who is equipped to work with the learning disabled.

Programs Offerings: Add a learning disabled component. This is aimed at students who have the capability to function at the college level but due to problems such dyslexia, visual or audiotry perception or, visual-motor coordination are unable to function successfully. This would not be aimed towards the educable mentally handicapped individual.

E. **L.S.C. - Physical Facilities**

1. First year area needs to have space for (a) a receptionist area, (b) a workspace for C.A.I. and video programs, (c) space for individualized work, (d) an area for books, handouts, C.A.I. materials and video programs (e) a small meeting area for 3 to 5 individuals and (f) an office area.

2. Second year area needs to be provided to add additional office space for one instructor and a testing assessment area.

3. Third year increased work area, a small consulting room and an additional office.

N.B. Specific space requirements are included in the appendices.

F. **Faculty Development**

1. Provide a consultation service for individual faculty members to help them meet the needs of the underprepared learner.

2. Provide support services (ie. materials) for instructors who have students experiencing academic difficulty.

3. Send a monthly newsletter to faculty which discusses basic skill areas and gives implementation suggestions that instructors may use in their courses.

4. Conduct workshops where instructors could come to work on their own skills ie., speedreading, rapid reading techniques for technical materials, quick note taking techniques - ie. mapping, linear notes. Where applicable support staff should be encouraged to participate as part of the college emphasis of fostering a developmental community.

5. Present workshops on understanding and working with the developmental learner.

G. Evaluation and Treatment of Future Data

1. Accurate and concise records kept of students using the Centre.

2. Comparison study be made of the progress of students who were identified as "high risk" through the assessment testing who used the L.S.C. and those who did not use the L.S.C.

3. Follow up studies be done on students using the L.S.C. more than 3 times to see if support services were beneficial to them.

4. Evaluation of Centre by student users.

5. Evaluation of Centre by faculty.

6. Evaluation of Centre by "outside" team.

7. Evaluation of programs and facilities by L.S.C. staff members.

H. Community Access

1. Community have access to L.S.C.--on a user fee basis.

2. Members of the community be able to take assessment testing on a user fee basis.

3. Workshops may be provided on a limited basis for public school teachers.

V. DEFINITION OF TERMS

Achievement: The successful completion by a student or instructor of a unit of instruction, program, or course of studies based upon the meeting of specifically required competencies.

Assessment Tests: Standardized tests used to obtain an assessment of student skills in the areas of mathematics, reading comprehension, reading vocabulary, language/grammar and reference skills.

Audio Visual Programs: Courses of study or units of information on a specific topic that are presented through the use of televisions, videos, filmstrips, and films.

Basic Skills: Basic academic skills which are normally acquired in the elementary and high school that are necessary for success at college. Basic skills include computation, reading, writing, study skills, speech, and listening.

C.A.I.: Computer assisted instruction. Instruction that is presented through a computer to provide additional help to a student over and above class instruction by an instructor or tutor.

C.M.I.: Computer managed instruction. Instruction, feedback and testing carried out in a computer without, or with limited, intervention by an instructor or tutor.

Developmental Education: Is that instruction which gives attention to the development of academic and personal skills necessary for achievement. This term may be used interchangeably with the term "basic skills education."

Disadvantaged Student: Is a student whose past educational experience and economic background handicap success in post-secondary education.

E.S.L.: English as a Second Language students whose first (native) language is not English.

Entrance Tests: Test given by a college or university which a student must successfully pass before he/she may be enrolled at the college or university.

High Risk Students: Students who have discernable deficiencies in reading, writing and mathematics that are three or more grade level equivalents below the required entrance level.

L.A.C.: Learning Assistance Centre. A centre that focuses on individual learners. Its function is to help the prepared student optimize his/her skills and to help the underprepared student develop the basic skills necessary for success at the college.

L.R.C.: Learning Resources Centre. A centre that supports the instructional programs of the college through the provision of services and multimedia resources including print materials, audiovisual material, and equipment required for the effective delivery of these programs.

L.S.C.: Learning Skills Centre. Another term for a learning assistance centre.

Mainstreaming: Is the directed flow of students who have successfully completed remediation or have developed sufficient basic skills into regular college programs of study.

Medium Risk Students: Students whose skill level deficiencies fall between 1.5 and 2.99 grade level equivalents below the required entrance requirements.

Non-traditional Students: Students enrolled in college that do not fall into the category of the unmarried, young adult (18-24 years of age) student who has entered college directly after finishing their high school education.

Peer Tutoring: The process whereby students who are strong in a subject area tutor students who are having difficulties in the area.

Placement Tests: Tests taken by students that determine the particular course or grade level equivalent in which a student will be enrolled in.

Prepared Student: A student whose academic and communication skills are at a level that the student should be able to function successfully in college.

Post Secondary: Beyond the high school.

Programs: Refers to individualized assistance provided by the L.S.C. in areas of mathematics, reading, study skills, writing and E.S.L. . A program length is determined by the specific needs of a students. It may take as little as thirty minutes or several hours over a longer time span.

Remedial: Instruction or help given in those skills that are not at the basic skill level required for success in a particular field or subject.

Remedial Education: Remedial courses that emphasize basic skills that students were expected to have mastered prior to entry into post secondary education.

Remediation: The process by which academic deficiencies are overcome.

Software: A series of written instructions and data that program what a computer will do.

Tutee: A person who is being taught by a tutor.

Tutor: A person who directs and evaluates the development of skills and studies of a student on a one-to-one basis over and above, or in conjunction with, what is taught in a specific subject area by an instructor.

Underprepared Student: A student whose academic and/or communication skills are below the level identified as necessary for success in a college program.

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VII. APPENDICIES

A. Data Base

The results of the needs assessment are found in the following data base. Specific college departments are identified by numbers and then within each department students are given numbers to provide anonymity. The scores are given in raw scores, scaled scored stanine percentiles and grade level equivalents. For matters of simplification, the researcher refers to the results in grade equivalents when discussing the data.

College Department Key

1101 - Academic Development

1102 - Administrative Studies

1103 - Humanities and Social Sciences

1104 - Visual and Performing Arts

1105 - Computer Technology

1106 - Athletics and Physical Education

1107 - Office Administration

1108 - Early Childhood

1109 - Nursing

1111 - Science

1112 - Education

1113 - Engineering

MATH SCORES

Group	1101	1102	1103	1104	1105	1106	1107	1108	1109	1111	1112	1113
Number	57	41	17	15	10	12	30	4	14	47	26	19
Grade	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
12	17 - 30	33 - 80	11 - 65	8 - 53	9 - 90	7 - 58	4 - 12		7 - 50	43 - 92	17 - 65	18 - 95
11	6 - 11	4 - 10	2 - 12	2 - 13	1 - 10	1 - 8			2 - 14	3 - 6	4 - 1	1 - 5
10	7 - 12	3 - 7	4 - 23	2 - 13		2 - 17	9 - 30		2 - 14	1 - 2	4 - 15	
9	7 - 12			2 - 13		2 - 17	3 - 10		1 - 7			
8	5 - 9	1 - 2					5 - 17	2 - 50			2 - 8	
7	5 - 9			1 - 7			1 - 3	1 - 25				
6	4 - 7						3 - 10	1 - 25	2 - 14		1 - 4	
5	2 - 3						1 - 3				1 - 4	
4 and under	4 - 7						1 - 3					
Highest Score	12.9	12.9	12.9	12.9	12.9	12.9	12.9	8.4	12.9	12.9	12.9	12.9
Lowest Score	2.1	8.1	10.0	7.3	11.3	9.0	5.2	6.3	6.0	10.9	5.3	11.6
Class Means	10.1	12.9	12.6	12.1	12.9	12.5	9.7	7.8	12.0	12.9	12.5	12.9
College Means	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9

Reference

Group	1101	1102	1103	1104	1105	1106	1107	1108	1109	1111	1112	1113
Number	57	41	17	15	10	12	30	4	14	47	26	19
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Grade												
12	26 - 24	30 - 75	14 - 82	11 - 73	8 - 80	8 - 67	13 - 43	1 - 25	8 - 57	38 - 81	21 - 81	18 - 95
11	14 - 25	5 - 13	5 - 18	1 - 7		3 - 25	9 - 30		3 - 21	7 - 15	1 - 4	1 - 5
10	4 - 7	3 - 13			1 - 10		3 - 10		1 - 7		2 - 8	
9												
8	5 - 9	1 - 2		2 - 13			1 - 3				1 - 4	
7	3 - 5			1 - 7			2 - 7	1 - 25				
6							1 - 3	2 - 50	1 - 7	2 - 4		
5	1 - 2					1 - 8						
4	4 - 7				1 - 10		1 - 3		1 - 7		1 - 4	
Highest Score	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
Lowest Score	4.2	5.5	11.0	11.0	4.2	5.5	2.5	6.4	4.2	6.4	4.7	6.4
Class Means	12.2	12.9	12.9	12.9	12.9	12.7	11.9	9.5	12.6	12.9	12.9	12.9
College Means	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6

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Comprehension

Group	1101	1102	1103	1104	1105	1106	1107	1108	1109	1111	1112	1113
Number	57	41	17	15	10	12	30	4	14	47	26	19
Grade	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
15	1 - 2	2 - 5	2 - 12	1 - 7	3 - 30	1 - 8	1 - 3		3 - 21	7 - 15		3 - 16
14	11 - 22	6 - 15	2 - 12	2 - 13	1 - 10	1 - 8			2 - 14	4 - 9	3 - 12	5 - 26
13	12 - 24	2 - 5	2 - 12	1 - 7	1 - 10	2 - 17	3 - 10		6 - 43	9 - 19	5 - 19	5 - 26
12	6 - 12	6 - 15	5 - 29	2 - 13		2 - 17	3 - 10		1 - 7	10 - 21	3 - 12	1 - 5
11	3 - 6	4 - 10		2 - 13		2 - 17	2 - 7	1 - 25	1 - 7	2 - 4	3 - 12	
10	5 - 10	5 - 12	3 - 18	5 - 33	3 - 30	1 - 8	10 - 33	1 - 25	1 - 7	5 - 11	6 - 23	3 - 16
9	4 - 8	5 - 12	2 - 12	1 - 7			4 - 13	1 - 25		2 - 4	1 - 4	1 - 5
8	5 - 10	4 - 10				2 - 17	2 - 7			4 - 9	4 - 15	1 - 5
7	2 - 4	4 - 10	1 - 6	1 - 7		1 - 8	5 - 17	1 - 25		3 - 6	1 - 4	
6 Under	1 - 2	3 - 7			2 - 20					1 - 2		
Highest Score	15	15	15	15	15	15	15	11.5	15	15	14.4	15
Lowest Score	6.6	6.3	7.5	7.5	6.0	7.5	7.5	7.0	10.1	6.0	7.5	8.7
Class Means	12.2	10.4	12.8	12.2	12.8	12.8	10.4	9.3	13.7	12.8	12.0	13.5
College Means	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0

N.B. There is a grade discrepancy between Academic Devlopment grade levels and the rest of the students in the study.

All students except Academic Development students were tested using the adult cut-rate time. The timing difference in the vocabulary area was 2 1/2 minutes and in comprehension it was 5 minutes. The Academic Development students have a grade inflation level of approximately 2 grades above other areas as a result.

The Academic Development students had written the Nelson-Denny previously for entrance placement levels.

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VOCABULARY SCORES

Group	1101	1102	1103	1104	1105	1106	1107	1108	1109	1111	1112	1113
Number	57	41	17	15	10	12	30	4	14	47	26	19
Grade	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
15	5 - 10	2 - 5	1 - 6	3 - 20	3 - 30	1 - 8	4 - 13	1 - 25	4 - 29	8 - 17	4 - 15	6 - 32
14	7 - 14	13 - 32	6 - 35	1 - 7	3 - 30	3 - 25	1 - 3		6 - 43	12 - 25	5 - 19	3 - 16
13	10 - 20	6 - 15	6 - 35	4 - 27	1 - 10	3 - 25	6 - 20	1 - 25	2 - 14	9 - 19	4 - 15	4 - 21
12	5 - 10	5 - 12		1 - 7	1 - 10	1 - 8	7 - 23		2 - 14	6 - 13	4 - 15	4 - 21
11	8 - 16	5 - 12	2 - 12	1 - 7			3 - 10		1 - 7	3 - 6	1 - 4	1 - 5
10	5 - 10	5 - 12		4	1 - 10	3 - 25	3 - 10	2 - 50		4 - 9	5 - 19	
9	4 - 8	2 - 5	1 - 6	1 - 7			2 - 7			1 - 2		
8	2 - 4	3 - 7				1 - 8	4 - 13			4 - 9	3 - 12	1 - 5
7	3 - 6		1 - 6									
6 Under					1 - 10							
Highest Score	15	15	15	15	15	15	15	15	15	15	15	15
Lowest Score	7.5	8.6	7.9	9.2	6.8	8.9	8.3	10.1	11.7	8.3	8.9	8.6
Class Means	13.1	13.1	13.8	13.3	14.0	13.3	12.9	13.6	14.5	13.8	13.3	14.3
College Means	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4

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VOCABULARY AND COMPREHENSION TOTAL

Group	1101	1102	1103	1104	1105	1106	1107	1108	1109	1111	1112	1113
Number	57	41	17	15	10	12	30	4	14	47	26	19
Grade	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
15	5 - 10	2 - 5	1 - 6	1 - 7	1 - 10	1 - 8	2 - 7		2 - 14	5 - 11	1 - 4	4 - 21
14	6 - 12	6 - 15	3 - 18	3 - 20	4 - 40	1 - 8	2 - 7	1 - 25	6 - 43	10 - 21	4 - 15	4 - 21
13	14 - 28	4 - 10	7 - 41	1 - 7	2 - 20	3 - 25	2 - 7		4 - 29	12 - 26	7 - 30	4 - 21
12	7 - 14	9 - 22	2 - 12	3 - 20			5 - 17		1 - 7	5 - 11	4 - 15	4 - 21
11	3 - 6	6 - 15		2 - 13		5 - 42	5 - 17	1 - 25		3 - 6	1 - 4	1 - 5
10	7 - 14	3 - 7	2 - 12	3 - 20	1 - 10		9 - 63		1 - 7	6 - 13	5 - 19	1 - 5
9	5 - 10	6 - 15	1 - 6	1 - 7		2 - 17		1 - 25		1 - 2	3 - 12	
8		3 - 7		1 - 7	1 - 10		3 - 10	1 - 25		2 - 4	2 - 8	1 - 5
7	1 - 2	1 - 2	1 - 6				2 - 7			2 - 4		
6 and Under	2 - 4	1 - 2			1 - 10					1 - 2		
Highest Score	15	15	15	15	15	15	15	14.9	15	15	15	15
Lowest Score	3.1	6.3	7.3	8.8	6.3	9.3	7.5	8.3	10.9	6.4	8.8	8.9
Class Means	12.8	12.1	13.1	12.8	13.[illegible]	12.8	12.0	12.0	14.0	13.3	12.7	13.8
College Means	12.8	12.8	12.8	12.8	12.[illegible]	12.8	12.8	12.8	12.8	12.8	12.8	12.8

N.B. There is a grade discrepancy between Academic Development grade levels and the rest of the students in the study.

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Rate

Group	1101	1102	1103	1104	1105	1106	1107	1108	1109	1111	1112	1113
Number	57	41	17	15	10	12	30	4	14	47	26	19
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Grade												
15	4 - 10	10 - 24	5 - 29	6 - 40	1 - 10	2 - 17	8 - 27		5 - 36	15 - 32	15 - 54	9 - 47
14		1 - 2	2 - 12	1 - 7	1 - 10	1 - 8			1 - 7	1 - 2	3 - 12	
13	2 - 5	3 - 7	4 - 24	1 - 7		3 - 25	3 - 10		5 - 36	8 - 17	2 - 8	2 - 11
12	1 - 2	2 - 5	2 - 12		2 - 20	2 - 17	1 - 3	1 - 25		2 - 4	1 - 4	1 - 5
11	1 - 2	1 - 2	1 - 6		1 - 10	1 - 8	1 - 3	1 - 25	1 - 7	2 - 4	1 - 4	
10	3 - 7	4 - 10	1 - 6		2 - 20	1 - 8	2 - 7	1 - 25		7 - 15	1 - 4	2 - 11
9	3 - 7	4 - 10	2 - 12	2 - 13			4 - 13		1 - 7	3 - 6	1 - 4	2 - 11
8	5 - 12	5 - 12		1 - 7		1 - 8	2 - 7	1 - 25	1 - 7	5 - 11		
7	6 - 14	3 - 7		2 - 13	1 - 10		7 - 23		1 - 7	2 - 4		2 - 11
6 under	15 - 36	5 - 12		2 - 13	2 - 20	1 - 8	2 - 7			2 - 4	4 - 15	1 - 5
Highest Score	15.3	15.3	15.3	15.3	15.3	15.3	15.3	12.3	15.3	15.3	15.3	15.3
Lowest Score	under 6.0	6.0	9.1	under 6.0	under 6.0	6.5	6.5	8.4	7.0	under 6.0	under 6.0	6.5
Class Means	7.7	11.3	13.8	13.0	11.3	13.0	11.3	10.3	13.0	12.3	15.3	14.6
College Means	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8

Students whose score levels fall 1.5 grade levels or more below entrance requirements have been identified as risk students.

Students whose grade level equivalents fall 1.5 to 2.99 grade levels below entrance requirements have been designated medium risk while students whose grade level equivalent scores fall 3 or more grade levels below entrance requirements have been identified as high risk.

The student score levels may be found by looking in the data base in the department area and finding the students number.

RISK STUDENTS

1101	High Risk:	5-M, 7-M, 8-M, 15-M, 16-M, 21-E, 23-M, 36-M, 38-M, 42-M, 43-M, 45-M, 50-M, 52-M
	Medium Risk:	2-M, 3-M, 4-M, 10-M, 20-M, 21-M, 28-M, 34-M, 37-M, 51-M, 54-M, 55-M
1102	High Risk:	1, 1, 11, 17, 18, 19, 22, 26, 29, 34
	Medium Risk:	4, 9, 10, 13, 15, 17, 33
1103	High Risk:	5, 11
	Medium Risk:	7, 12
1104	High Risk:	13, 14
	Medium Risk:	8, 11, 12, 15
1105	High Risk:	1, 5
	Medium Risk:	2
1106	High Risk:	10, 12
	Medium Risk:	1
1107	High Risk:	2, 16, 23, 24, 28
	Medium Risk:	5, 6, 10, 14, 20, 22
1108	High Risk:	3, 4,
1109	Medium Risk:	3

1111 **High Risk:** 7, 18, 21, 23, 24, 43

Medium Risk: 4, 22, 31, 37, 39, 41

1112 **High Risk:** 6, 13, 15, 22, 24

Medium Risk: 2, 4, 5, 16, 17, 18

1113 **High Risk:** 11

Medium Risk: 16

KEY

... = No score available

RS = Raw Score

NS = National Stanine

GR = # students used in deriving LOCAL percentile or stanine

CL = # of students who attempted the sub-test

SS = Scale Score

LP = Local Percentile

GE = Grade Equivalent

LS = Local Stanine -

NP = National Percentile

V = Vocabulary - Nelson-Denny

C = Comprehension - Nelson-Denny

RATE = Reading Rate - Nelson-Denny

1101 - Academic Development

1102 - Administrative Studies

1103 - Humanities and Social Sciences

1104 - Visual and Performing Arts

1105 - Computer Technology

1106 - Athletics and Physical Education

1107 - Office Administration

1108 - Early Childhood

1109 - Nursing

1111 - Science

1112 - Education

1113 - Engineering

* Discrepancy in grades

1101

Academic Development **Nelson-Denny** 1101

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		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
	RS	24	20	RS	11	34	45	105	110	100
	SS	553	674	SS						
	GE	9.0	12.9	GE	8.1	11.1	997	6.9		
1	NP	15	57	NP	1	33	4	1		
	NS	3	5	NS						
	LP	16	47	LP						
	LS	3	5	LS						
	RS	14	14	RS	31	44	75	252	120	100
	SS	445	549	SS						
	GE	5.2	7.8	GE	13.8	13.8	13.6	13.8		
2	NP	2	14	NP	28	69	47	65		
	NS	1	3	NS						
	LP	3	8	LP						
	LS	1	2	LS						
	RS	24	22	RS	45	62	107	364	DID	120
	SS	553	729	SS					NOT	
	GE	9.0	12.9	GE	15	15	15	15.3	TAKE	
3	NP	15	78	NP	66	99	87	96		
	NS	3	7	NS						
	LP	16	76	LP						
	LS	3	6	LS						
	RS	26	22	RS	39	44	83	207	130	120
	SS	573	729	SS						
	GE	9.6	12.9	GE	14.6	13.8	14.2	10.3		
4	NP	20	78	NP	50	69	58	34		
	NS	3	7	NS						
	LP	19	76	LP						
	LS	3	6	LS						
	RS	17	17	RS	39	32	71	161	120	100
	SS	477	606	SS						
	GE	6.3	11.0	GE	14.6	10.8	13.3	7.0		
5	NP	4	29	NP	50	26	39	11		
	NS	1	4	NS						
	LP	5	20	LP						
	LS	2	3	LS						
	RS	21	20	RS	28	46	74	155	130	100
	SS	522	674	SS						
	GE	8.1	12.9	GE	13.3	14.1	13.6	6.5		
6	NP	9	57	NP	20	73	45	8		
	NS	2	5	NS						
	LP	11	47	LP						
	LS	3	5	LS						
	RS	28	16	RS	25	38	63	143	130	130
	SS	594	568	SS						
	GE	10.5	10.2	GE	12.7	12.8	12.7	6.0		
7	NP	27	23	NP	13	48	25	5		
	NS	4	4	NS						
	LP	26	15	LP						
	LS	4	3	LS						

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1101 **Academic Development** • Discrepancy in grades 1101

Nelson-Denny

		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
	RS	20	16	RS	31	43	74	252	130	120
	SS	511	588	SS						
	GE	7.8	10.2	GE	13.8	13.5	13.6	13.8		
8	NP	8	23	NP	28	62	45	65		
	NS	2	4	NS						
	LP	9	15	LP						
	LS	2	3	LS						
	RS	40	20	RS	32	35	67	182	DID	131
	SS	741	674	SS					NOT	
	GE	12.9	12.9	GE	13.9	11.5	13.1	8.4	NEED	
9	NP	80	57	NP	31	33	32	18	TO	
	NS	7	5	NS					TAKE	
	LP	82	47	LP						
	LS	7	5	LS						
	RS	20	18	RS	39	41	80	161	130	100
	SS	511	627	SS						
	GE	7.8	11.8	GE	14.7	13.2	14.0	7.0		
10	NP	8	37	NP	50	56	55	11		
	NS	2	4	NS						
	LP	9	28	LP						
	LS	2	4	LS						
	RS	36	24	RS	69	48	107	161	130	110
	SS	686	806	SS						
	GE	12.9	12.9	GE	15	14.4	15	7.0		
11	NP	61	94	NP	96	77	87	11		
	NS	6	8	NS						
	LP	61	95	LP						
	LS	6	8	LS						
	RS	24	24	RS	71	49	120	207	130	100
	SS	553	806	SS						
	GE	9.0	12.9	GE	15	14.4	15	10.3		
12	NP	15	94	NP	97	80	94	34		
	NS	3	8	NS						
	LP	16	95	LP						
	LS	3	8	LS						
	RS	35	22	RS	24	32	56		130	120
	SS	673	729	SS						
	GE	12.9	12.9	GE	12.4	10.8	11.6			
13	NP	56	78	NP	10	26	15			
	NS	5	7	NS						
	LP	58	76	LP						
	LS	5	6	LS						
	RS	31	15	RS	16	48	64	182	130	120
	SS	627	568	SS						
	GE	11.6	8.9	GE	9.6	14.4	12.8	8.4		
14	NP	38	18	NP	2	77	27	18		
	NS	4	3	NS						
	LP	38	10	LP						
	LS	4	2	LS						

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Academic Development

* Discrepancy in grades

Nelson-Denny

		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
	RS	4	10	RS	16	26	42		100	100
	SS	328	476	SS						
	GE	2.1	4.2	GE	9.6	8.7	9.1			
15	NP	1	4	NP	2	15	3			
	NS	1	1	NS						
	LP	1	2	LP						
	LS	1	1	LS						
	RS	11	15	RS	13	29	42	143	110	100
	SS	409	568	SS						
	GE	3.5	8.9	GE	8.6	9.3	9.1	6.0		
16	NP	1	18	NP	1	23	3	5		
	NS	1	3	NS						
	LP	1	10	LP						
	LS	1	2	LS						
	RS	30	18	RS	17	27	44	143	110	110
	SS	617	627	SS						
	GE	11.3	11.8	GE	10.1	8.7	9.5	6.0		
17	NP	35	37	NP	2	11	3	5		
	NS	4	4	NS						
	LP	34	28	LP						
	LS	4	4	LS						
	RS	31	16	RS						
	SS	627	588	SS						
	GE	11.6	10.2	GE						
18	NP	38	23	NP					PC 120	
	NS	4	4	NS						
	LP	38	15	LP						
	LS	4	3	LS						
	RS	37	20	RS	49	48	97	130	130	110
	SS	698	674	SS						
	GE	12.9	12.9	GE	15	14.4	15.0			
19	NP	66	57	NP	73	77	77			
	NS	6	5	NS						
	LP	65	47	LP						
	LS	6	5	LS						
	RS	28	19	RS	22	28	50	182		
	SS	594	649	SS						
	GE	10.5	12.4	GE	11.7	9.3	10.6	8.4		
20	NP	27	46	NP	7	15	8	18		
	NS	4	5	NS						
	LP	26	36	LP						
	LS	4	4	LS						

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Academic Development

* Discrepancy in grades

Nelson-Denny

		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
	RS	19	***	RS	15	20	35		110	100
	SS	501	***	SS						
	GE	7.3	****	GE	9.2	7.0	7.9			
21	NP	7	***	NP	1	6	1			
	NS	2	***	NS						
	LP	8	***	LP						
	LS	2	***	LS						
	RS	38	21	RS	21	42	63	219	130	120
	SS	711	701	SS						
	GE	12.9	12.9	GE	11.4	13.5	12.7	11.3		
22	NP	71	68	NP	7	63	25	43		
	NS	6	6	NS						
	LP	70	62	LP						
	LS	6	6	LS						
	RS	12	11	RS	20	30	50		120	100
	SS	421	494	SS	11.1	10.0	10.6			
	GE	4.3	4.7	GE			8			
23	NP	1	6	NP	6	20				
	NS	1	2	NS						
	LP	2	3	LP						
	LS	1	1	LS						
	RS	27	23	RS	40	41	81	170	Didn't need to take	110
	SS	584	764							
	GE	10.0	12.9	GE	14.8	13.2	14.0	7.7		
24	NP	24	87	NP	54	56	56	13		
	NS	4	7	NS						
	LP	23	87	LP						
	LS	4	7	LS						
	RS	28	19	RS	18	38	56		120	110
	SS	594	649	SS						
	GE	10.5	12.4	GE	10.5	12.8	11.6			
25	NP	27	46	NP	3	48	15			
	NS	4	5	NS						
	LP	26	36	LP						
	LS	4	4	LS						
	RS	32	16	RS					FR 20	
	SS	638	588	SS						
	GE	12.0	10.2	GE						
26	NP	43	23	NP					BI 130	
	NS	5	4	NS						
	LP	44	15	LP						
	LS	5	3	LS						
	RS	44	24	RS	31	34	75	3.5	Didn't need to take	120
	SS	832	806	SS						
	GE	12.9	12.9	GE	13.8	11.5	13.6	15.3		
27	NP	97	94	NP	28	33	47	90		
	NS	9	8	NS						
	LP	98	95	LP						
	LS	9	8	LS						

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1101 Academic Development   Nelson-Denny   * Discrepancy in grades   1101

		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
	RS	18	15	RS	16	43	59	155	120	100
	SS	489	568	SS						
	GE	6.7	8.9	GE	9.6	13.5	12.1	6.5		
28	NP	5	18	NP	2	63	19	8		
	NS	2	3	NS						
	LP	7	10	LP						
	LS	2	2	LS						
	RS	41	22	RS					130	120
	SS	758	729	SS	D I D N O T W R I T E					
	GE	12.9	12.9	GE						
29	NP	85	78	NP						
	NS	7	7	NS						
	LP	87	76	LP						
	LS	7	6	LS						
	RS	33	21	RS	27	42	69	195		
	SS	650	701	SS						
	GE	12.5	12.9	GE	13.1	13.5	13.2	9.1	FRENCH	
30	NP	47	68	NP	17	63	35	26	120	
	NS	5	6	NS					ONLY	
	LP	49	62	LP						
	LS	5	6	LS						
	RS	31	20	RS						120
	SS	627	674	SS						
	GE	11.6	12.9	GE						
31	NP	38	57	NP						
	NS	4	5	NS						
	LP	38	47	LP						
	LS	4	5	LS						
	RS	43	23	RS	26	36	62	105	130	120
	SS	804	764	SS						
	GE	12.9	12.91	GE	12.9	12.2	12.6	6.0		
32	NP	93	87	NP	15	40	23	1		
	NS	8	7	NS						
	LP	96	87	LP						
	LS	9	7	LS						
	RS	41	20	RS	20	24	44	105	120	130
	SS	758	674	SS						
	GE	12.9	12.9	GE	11.1	8.1	9.5	6.0		
33	NP	85	57	NP	6	8	3	1		
	NS	7	5	NS						
	LP	87	47	LP						
	LS	7	5	LS						
	RS	20	15	RS	9	29	38	155	110	100
	SS	511	568	SS						
	GE	7.8	8.9	GE	7.7	9.3	12.8	6.5		
34	NP	8	18	NP	1	17	2	8		
	NS	2	3	NS						
	LP	9	10	LP						
	LS	2	2	LS						

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Academic Development

Nelson-Denny

* Discrepancy in grades

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		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
	RS	27	14	RS	22	23	45		130	120
	SS	584	549	SS						
	GE	10.0	7.8	GE	11.7	7.5	9.7			
35	NP	24	14	NP	7	8	.4			
	NS	4	3	NS						
	LP	23	8	LP						
	LS	4	2	LS						
	RS	12	18	RS	21	47	68	161	120	100
	SS	421	627	SS	11.4	14.1	13.1	7.0		
	GE	4.3	11.8	GE	7	73	33	11		
	NP	1	37	NP						
36	NS	1	4	NS						
	LP	2	28	LP						
	LS	1	4	LS						
	RS	34	19	RS	17	28	45	105	120	NOT
	SS	661	649	SS	9.3	9.7				REG.
	GE	12.9	12.4	GE	2	15	9.7	1		IN
37	NP	52	46	NP			4			MATH
	NS	5	5	NS						
	LP	53	36	LP						
	LS	5	4	LS						
	RS	14	11	RS	39	38	77	195	120	100
	SS	445	494	SS						
	GE	5.2	4.7	GE	14.7	12.8	13.8	9.1		
	NP	2	6	NP	50	48	50	26		
38	NS	1	2	NS						
	LP	3	3	LP						
	LS	1	1	LS						
	RS	30	17	RS	8	18	26	182	120	120
	SS	617	606	SS	7.5	6.6	6.2	.4		
	GE	11.3	11.0	GE	1	3	1	18		
	NP	35	29	NP						
39	NS	4	4	NS						
	LP	34	20	LP						
	LS	4	3	LS						
	RS	29	20	RS					NO	110
	SS	605	674	SS					ENG.	
	GE	10.9	12.9	GE						
	NP	31	57	NP					CHEM	
40	NS	4	5	NS					110	
	LP	29	47	LP						
	LS	4	5	LS						
	RS	39	18	RS	39	42	81		130	130
	SS	726	427	SS	14.7	13.5	14.0			
	GE	12.9	11.8	GE	50	63	56			
	NP	76	37	NP						
	NS	6	4	NS						
41	LP	76	28	LP						
	LS	6	4	LS						

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Academic Development **Nelson-Denny**

		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
42	RS	24	19	RS	32	49	81	129	130	120
	SS	553	644	SS						
	GE	9.0	12.4	GE	13.9	14.4	14.0	6.0		
	NP	15	46	NP	31	77	56	3		
	NS	3	5	NS						
	LP	16	36	LP						
	LS	3	4	LS						
43	RS	18	17	RS	36	38	74	15	130	120
	SS	489	606	SS	14.4	12.8	13.6			
	GE	6.7	11.0	GE	43	48	45	8		
	NP	5	29	NP						
	NS	2	4	NS						
	LP	7	20	LP						
	LS	2	3	LS						
44	RS	35	23	RS	61	47	108	182	130	110
	SS	686	764	SS						
	GE	12.9	12.9	GE	15	14.1	15	8.4		
	NP	61	87	NP	92	73	88	18		
	NS	6	7	NS						
	LP	61	87	LP						
	LS	6	7	LS						
45	RS	16	18	RS	23	27	50	116	120	100
	SS	466	627	SS						
	GE	6.0	11.8	GE	12.0	8.7	10.6	6.0		
	NP	3	37	NP	8	11	8	1		
	NS	1	4	NS						
	LP	4	28	LP						
	LS	1	4	LS						
46	RS	26	15	RS	22	30	52	116	120	100
	SS	573	568	SS						
	GE	9.6	8.9	GE	11.7	10.0	10.9	6.0		
	NP	20	18	NP	7	20	10	1		
	NS	3	3	NS						
	LP	19	10	LP						
	LS	3	2	LS						
47	RS	27	18	RS	32	47	79	207	130	120
	SS	584	627	SS						
	GE	10.0	11.8	GE	13.9	14.1	13.9	10.3		
	NP	24	37	NP	31	73	53	34		
	NS	4	4	NS						
	LP	23	28	LP						
	LS	4	4	LS						
48	RS	21	14	RS	24	26	50		120	100
	SS	522	549	SS						
	GE	8.1	7.8	GE	12.4	8.7	10.6			
	NP	9	14	NP	10	11	8			
	NS	2	3	NS						
	LP	11	8	LP						
	LS	3	2	LS						

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Academic Development | **Nelson-Denny** | *Discrepancy in grades

		MATH C & A	REF SKILLS		VOC	COMP	TOTAL V & C	READING RATE	ENG ENR	1101 MATH ENR
	RS	35	18	RS				105	130	130
	SS	673	627	SS						
	GE	12.9	11.8	GE				6.0		
49	NP	56	37	NP						
	NS	5	4	NS						
	LP	58	28	LP						
	LS	5	4	LS						
	RS	21	17	RS	8	42	50	230	130	120
	SS	522	606	SS						
	GE	8.1	11.0	GE	7.5	13.5	10.6	12.3		
50	NP	9	29	NP	1	63	8	52		
	NS	2	4	NS						
	LP	11	20	LP						
	LS	3	3	LS						
	RS	26	18	RS	18	34	52	399	120	120
	SS	573	627	SS						
	GE	9.6	11.8	GE	10.5	11.5	10.9	15.3		
	NP	20	37	NP	3	33	10	98		
51	NS	3	4	NS						
	LP	19	28	LP						
	LS	3	4	LS						
	RS	17	8	RS	22	32	54	170	120	100
	SS	477	438	SS						
	GE	6.3	3.1	GE	11.7	10.8	11.3	7.7		
	NP	4	2	NP	7	26	13	13		
52	NS	1	1	NS						
	LP	5	1	LP						
	LS	2	1	LS						
	RS	33	18	RS	19	40	59	143	130	130
	SS	650	627	SS						
	GE	12.5	11.8	GE	10.9	13.2	12.1	6.0		
	NP	47	37	NP	5	56	19	5		
53	NS	5	4	NS						
	LP	49	28	LP						
	LS	5	4	LS						
	RS	20	18	RS	31	46	77	195	130	100
	SS	511	627	SS						
	GE	7.8	11.8	GE	13.8	14.1	13.8	9.1		
	NP	8	37	NP	28	73	50	26		
54	NS	2	4	NS						
	LP	9	28	LP						
	LS	2	4	LS						
	RS	21	19	RS	38	50	88	182	130	120
	SS	522	649	SS	14.6	14.7	14.5	8.4		
	GE	8.1	12.4	GE	48	82				
	NP	9	46	NP						
55	NS	2	5	NS						
	LP	11	36	LP						
	LS	3	4	LS						

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* Discrepancy in grades

1101 Academic Development Nelson-Denny 1101

	MATH C & A		REF SKILLS	VOC		COMP	TOTAL V & C	READING RATE	ENG ENR	MATH ENR
C	CL	55	55	CL	50	50	50	42		
L	SS	505	640	SS	27	36	64	170		
A	GE	10.1	12.2	GE	13.1	12.2	12.8	7.7		
S	NP	24	42	NP	17	40		13		
S	LP	25	33	LP						
	LS	4	4	LS						
M	GR	292	290		GR					
E										
A										
N										
S										

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Canadian Achievement

Nelson - Denny

		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
1	RS	21	12	RS	17	28	45	
	SS	522	512	SS				
	GE	8.1	5.5	GE	10.1	9.3	9.7	
	NP	9	8	NP	2	15	5	
	NS	2	2	NS				
	LP	11	4	LP				
	LS	3	1	LS				
2	RS	42	21	RS	35	46	81	
	SS	779	701	SS				
	GE	12.9	12.9	GE	14.3	14.1	14.0	
	NP	89	68	NP	40	73	56	
	NS	7	6	NS				
	LP	91	62	LP				
	LS	8	6	LS				
3	RS	45	20	RS	37	26	63	230
	SS	869	674	SS				
	GE	12.9	12.9	GE	14.5	8.7	12.7	12.3
	NP	99	57	NP	46	11	25	52
	NS	9	5	NS				
	LP	99	47	LP				
	LS	9	5	LS				
4	RS	39	18	RS	14	36	50	195
	SS	726	627	SS				
	GE	12.9	11.8	GE	8.9	12.2	10.6	9.1
	NP	76	37	NP	1	40	8	26
	NS	6	4	NS				
	LP	76	28	LP				
	LS	6	4	LS				
5	RS	37	24	RS	22	42	64	195
	SS	698	806	SS				
	GE	12.9	12.9	GE	11.1	13.5	12.8	9.1
	NP	66	94	NP	7	63	27	26
	NS	6	8	NS				
	LP	65	95	LP				
	LS	6	8	LS				
6	RS	38	16	RS	30	34	64	170
	SS	711	588	SS				
	GE	12.9	10.2	GE	13.6	11.5	12.8	7.7
	NP	71	23	NP	26	33	27	13
	NS	6	4	NS				
	LP	70	15	LP				
	LS	6	3	LS				

Administrative Studies

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
7	RS	31	16	RS	40	46	86	387
	SS	627	588	SS				
	GE	11.6	10.2	GE	14.8	14.1	14.4	15.3
	NP	38	23	NP	54	73	62	98
	NS	4	4	NS				
	LP	38	15	LP				
	LS	4	3	LS				
8	RS	42	21	RS	25	30	55	357
	SS	779	701	SS				
	GE	12.9	12.9	GE	12.7	10.0	11.5	15.3
	NP	89	68	NP	13	20	14	95
	NS	7	6	NS				
	LP	91	62	LP				
	LS	8	6	LS				
9	RS	34	20	RS	22	30	52	301
	SS	661	674	SS				
	GE	12.9	12.9	GE	11.7	10.0	10.9	15.3
	NP	52	57	NP	7	20	10	87
	NS	5	5	NS				
	LP	53	47	LP				
	LS	5	5	LS				
10	RS	39	22	RS	18	28	46	230
	SS	726	729	SS				
	GE	12.9	12.9	GE	10.5	9.3	9.8	12.3
	NP	76	78	NP	3	15	5	52
	NS	6	7	NS				
	LP	76	76	LP				
	LS	6	6	LS				
11	RS	32	21	RS	16	18	34	131
	SS	638	701	SS				
	GE	12.0	12.9	GE	9.6	6.6	7.7	6.0
	NP	43	68	NP	2	3	1	1
	NS	5	6	NS				
	LP	44	62	LP				
	LS	5	6	LS				
12	RS	39	***	RS	28	28	56	301
	SS	726	***	SS				
	GE	12.9	****	GE	13.3	9.3	11.6	15.3
	NP	76	***	NP	20	15	15	87
	NS	6	***	NS				
	LP	76	***	LP				
	LS	6	***	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
13	RS	42	20	RS	21	32	53	182
	SS	779	674	SS				
	GE	12.9	12.9	GE	11.4	10.8	11.1	8.4
	NP	89	57	NP	7	26	12	18
	NS	7	5	NS				
	LP	91	47	LP				
	LS	8	5	LS				
14	RS	42	24	RS	34	46	80	195
	SS	779	806	SS				
	GE	12.9	12.9	GE	14.2	14.1	14.0	9.1
	NP	89	94	NP	37	73	55	26
	NS	7	8	NS				
	LP	91	95	LP				
	LS	8	8	LS				
15	RS	32	18	RS	21	28	49	143
	SS	638	627	SS				
	GE	12.0	11.8	GE	11.4	9.3	10.4	6.0
	NP	43	37	NP	7	15	8	5
	NS	5	4	NS				
	LP	44	28	LP				
	LS	5	4	LS				
16	RS	29	21	RS	34	28	63	131
	SS	605	701	SS				
	GE	10.9	12.9	GE	14.2	9.3	12.6	6.0
	NP	31	68	NP	37	15	23	3
	NS	4	6	NS				
	LP	29	62	LP				
	LS	4	6	LS				
17	RS	34	22	RS	28	20	42	182
	SS	661	729	SS				
	GE	12.9	12.9	GE	11.7	7.0	9.1	8.4
	NP	52	78	NP	8	5	3	18
	NS	5	7	NS				
	LP	53	76	LP				
	LS	5	6	LS				
18	RS	30	20	RS	15	26	41	182
	SS	617	674	SS				
	GE	11.3	12.9	GE	9.2	8.7	8.9	8.4
	NP	35	57	NP	1	11	3	18
	NS	4	5	NS				
	LP	34	47	LP				
	LS	4	5	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	41	15	RS	13	16	29	207
	SS	758	568	SS				
	GE	12.9	8.[illegible]	GE	8.6	6.3	6.8	10.3
19	NP	85	18	NP	1	2	1	34
	NS	7	3	NS				
	LP	87	10	LP				
	LS	7	2	LS				
	RS	34	23	RS	33	22	55	182
	SS	661	764	SS				
	GE	12.9	12.9	GE	14.0	7.5	11.5	8.4
20	NP	52	87	NP	34	6	14	18
	NS	5	7	NS				
	LP	53	87	LP				
	LS	5	7	LS				
	RS	34	25	RS	51	56	107	291
	SS	661	860	SS				
	GE	12.9	12.9	GE	15	15	15	15.3
	NP	52	99	NP	78	94	87	83
21	NS	5	9	NS				
	LP	53	99	LP				
	LS	5	9	LS				
	RS	27	16	RS	17	24	41	252
	SS	584	588	SS				
22	GE	10.0	10.2	GE	10.1	81	8.9	13.3
	NP	24	23	NP	2	8	3	62
	NS	4	4	NS				
	LP	23	15	LP				
	LS	4	3	LS				
	RS	43	25	RS	41	46	87	219
	SS	804	860	SS				
23	GE	12.9	12.9	GE	14.9	14.1	14.5	11.3
	NP	93	99	NP	56	73	64	43
	NS	8	9	NS				
	LP	96	99	LP				
	LS	9	9	LS				
	RS	40	21	RS	34	44	78	161
	SS	741	701	SS				
	GE	12.9	12.9	GE	14.2	13.8	13.9	7.0
	NP	80	68	NP	37	69	51	11
	NS	7	6	NS				
24	LP	82	62	LP				
	LS	7	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	40	21	RS	26	34	60	195
	SS	741	701	SS				
25	GE	12.9	12.9	GE	12.9	11.5	12.3	9.1
	NP	80	68	NP	15	33	20	26
	NS	7	6	NS				
	LP	82	62	LP				
	LS	7	6	LS				
	RS	28	20	RS	14	30	44	161
	SS	594	674	SS				
	GE	10.5	12.9	GE	8.9	10.0	9.5	7.0
	NP	27	57	NP	1	20	3	
26	NS	4	5	NS				
	LP	26	47	LP				
	LS	4	5	LS				
	RS	39	24	RS	34	50	84	357
	SS	726	806	SS				
	GE	12.9	12.9	GE	14.2	14.7	14.2	15.3
27	NP	76	94	NP	37	82	60	95
	NS	6	8	NS				
	LP	76	95	LP				
	LS	6	8	LS				
	RS	34	24	RS	37	36	73	207
	SS	661	806	SS				
28	GE	12.9	12.9	GE	14.5	12.2	13.5	10.3
	NP	52	94	NP	46	40	43	34
	NS	5	8	NS				
	LP	53	95	LP				
	LS	5	8	LS				
	RS	32	21	RS	23	20	43	116
	SS	638	701	SS				
29	GE	12.0	12.9	GE	12.0	7.0	9.3	6.0
	NP	43	68	NP	8	5	3	1
	NS	5	6	NS				
	LP	44	62	LP				
	LS	5	6	LS				
	RS	37	18	RS	36	36	72	278
	SS	698	627	SS				
	GE	12.9	11.8	GE	14.4	12.2	13.4	15.3
30	NP	66	37	NP	43	40	41	78
	NS	6	4	NS				
	LP	65	28	LP				
	LS	6	4	LS				

Administrative Studies

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
31	RS	34	23	RS	27	30	57	278
	SS	661	764	SS				
	GE	12.9	12.9	GE	13.1	10.0	11.8	15.3
	NP	52	87	NP	17	20	17	78
	NS	5	7	NS				
	LP	53	87	LP				
	LS	5	7	LS				
32	RS	36	17	RS	32	38	70	241
	SS	686	606	SS				
	GE	12.9	11.0	GE	13.9	12.8	13.3	13.0
	NP	61	29	NP	31	48	37	58
	NS	6	4	NS				
	LP	61	20	LP				
	LS	6	3	LS				
33	RS	41	20	RS	24	18	42	
	SS	758	674	SS				
	GE	12.9	12.9	GE	12.4	6.6	9.1	
	NP	85	57	NP	10	3	3	
	NS	7	5	NS				
	LP	87	47	LP				
	LS	7	5	LS				
34	RS	31	22	RS	17	20	37	207
	SS	627	729	SS				
	GE	11.6	12.9	GE	10.1	7.0	8.3	10.3
	NP	38	78	NP	2	5	2	34
	NS	4	7	NS				
	LP	38	76	LP				
	LS	4	6	LS				
35	RS	31	19	RS	33	48	81	315
	SS	627	649	SS				
	GE	11.6	12.4	GE	14.0	14.4	14.0	15.3
	NP	38	46	NP	34	77	56	90
	NS	4	5	NS				
	LP	38	36	LP				
	LS	4	4	LS				
36	RS	37	20	RS	34	26	60	266
	SS	698	674	SS				
	GE	12.9	12.9	GE	14.2	8.7	12.3	14.6
	NP	66	57	NP	37	11	20	72
	NS	6	5	NS				
	LP	65	47	LP				
	LS	6	5	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	37	23	RS	58	56	114	291
	SS	698	764	SS				
37	GE	12.9	12.9	GE	15	15	15	15.3
	NP	66	87	NP	90	94	91	83
	NS	6	7	NS				
	LP	65	87	LP				
	LS	6	7	LS				
	RS	42	22	RS	26	36	62	182
	SS	779	729	SS				
38	GE	12.9	12.9	GE	12.9	12.2	12.5	8.4
	NP	89	78	NP	15	40	23	18
	NS	7	7	NS				
	LP	91	76	LP				
	LS	8	6	LS				
	RS	33	22	RS	19	36	55	252
	SS	650	729	SS				
39	GE	12.9	12.9	GE	10.9	12.2	11.5	65
	NP	47	78	NP	5	40	14	13.8
	NS	5	7	NS				
	LP	49	76	LP				
	LS	5	6	LS				
	RS	39	17	RS	30	34	64	155
	SS	726	606	SS				
	GE	12.9	11.0	GE	13.6	11.5	12.8	6.5
	NP	76	29	NP	26	33	27	8
40	NS	6	4	NS				
	LP	76	20	LP				
	LS	6	3	LS				
	RS	40	22	RS	28	34	62	207
	SS	741	729	SS				
	GE	12.9	12.9	GE	13.3	11.5	12.6	10.3
	NP	80	78	NP	20	33	23	34
41	NS	7	7	NS				
	LP	82	76	LP				
	LS	7	6	LS				
CLASS MEANS	CL	41	40	EL				
	SS	694	696	SS	27	32	59	219
	GE	12.9	12.9	GE	13.1	10.4	12.1	11.3
	NP	64	66	NP	17	26	19	43
	NS	6	6	NS				
	LP	63	53	LP				
	LS	6	5	LS				
	GR	292	290	GR				

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		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	41	22	RS	39	38	77	195
	SS	758	729	SS				
	GE	12.9	12.9	GE	14.7	12.8	13.8	9.1
1	NP	85	78	NP	50	48	50	26
	NS	7	7	NS				
	LP	87	76	LP				
	LS	7	6	LS				
	RS	31	23	RS	41	40	81	252
	SS	627	764	SS				
	GE	11.6	12.9	GE	14.9	13.2	14.0	13.8
2	NP	38	87	NP	56	56	56	65
	NS	4	7	NS				
	LP	38	87	LP				
	LS	4	7	LS				
	RS	29	21	RS	34	46	80	195
	SS	605	701	SS				
	GE	10.9	12.9	GE	14.2	14.1	14.0	9.1
3	NP	31	68	NP	37	73	55	26
	NS	4	6	NS				
	LP	29	62	LP				
	LS	4	6	LS				
	RS	32	23	RS	27	38	65	252
	SS	638	764	SS				
	GE	12.0	12.9	GE	13.1	12.8	12.9	13.8
4	NP	43	87	NP	17	48	29	65
	NS	5	7	NS				
	LP	44	87	LP				
	LS	5	7	LS				
	RS	33	17	RS	10	22	32	230
	SS	650	606	SS				
	GE	12.5	11.0	GE	7.9	7.5	7.3	12.3
5	NP	47	29	NP	1	6	1	52
	NS	5	4	NS				
	LP	49	20	LP				
	LS	5	3	LS				
	RS	38	20	RS	30	28	58	230
	SS	711	674	SS				
	GE	12.9	12.9	GE	13.6	9.3	12.0	12.3
6	NP	71	57	NP	26	15	18	52
	NS	6	5	NS				
	LP	70	47	LP				
	LS	6	5	LS				

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		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
7	RS	30	21	RS	21	30	51	252
	SS	617	701	SS				
	GE	11.3	12.9	GE	11.4	10.0	10.7	13.8
	NP	35	68	NP	7	20	9	65
	NS	4	6	NS				
	LP	34	62	LP				
	LS	4	6	LS				
8	RS	29	24	RS	40	52	92	315
	SS	605	806	SS				
	GE	10.9	12.9	GE	14.8	15	14.9	15.3
	NP	31	94	NP	54	82	72	90
	NS	4	8	NS				
	LP	29	95	LP				
	LS	4	8	LS				
9	RS	32	18	RS	31	46	77	278
	SS	638	627	SS				
	GE	12.0	11.8	GE	13.8	14.1	13.8	15.3
	NP	43	37	NP	28	73	50	78
	NS	5	4	NS				
	LP	44	28	LP				
	LS	5	4	LS				
10	RS	36	18	RS	31	38	69	207
	SS	686	627	SS				
	GE	12.9	11.8	GE	13.8	12.8	13.2	10.3
	NP	61	37	NP	28	40	35	34
	NS	6	4	NS				
	LP	61	28	LP				
	LS	6	4	LS				
11	RS	33	23	RS	15	30	45	219
	SS	650	764	SS				
	GE	12.5	12.9	GE	9.2	10.0	9.7	11.3
	NP	47	87	NP	1	20	4	43
	NS	5	7	NS				
	LP	49	87	LP				
	LS	5	7	LS				
12	RS	39	23	RS	21	28	49	278
	SS	726	764	SS				
	GE	12.9	12.9	GE	11.4	9.3	10.4	15.3
	NP	76	87	NP	7	15	8	78
	NS	6	7	NS				
	LP	76	87	LP				
	LS	6	7	LS				

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		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
13	RS	29	21	RS	39	38	77	241
	SS	605	701	SS				
	GE	10.9	12.9	GE	14.7	12.8	13.8	13.0
	NP	31	68	NP	50	48	50	58
	NS	4	6	NS				
	LP	29	62	LP				
	LS	4	6	LS				
14	RS	32	22	RS	35	32	67	325
	SS	638	729	SS				
	GE	12.0	12.9	GE	14.3	10.8	13.1	15.3
	NP	43	78	NP	40	26	32	91
	NS	5	7	NS				
	LP	44	76	LP				
	LS	5	6	LS				
15	RS	39	24	RS	31	38	69	266
	SS	726	806	SS				
	GE	12.9	12.9	GE	13.8	12.8	13.2	15.3
	NP	76	94	NP	28	48	35	72
	NS	6	8	NS				
	LP	76	95	LP				
	LS	6	8	LS				
16	RS	27	21	RS	47	56	103	266
	SS	584	701	SS				
	GE	10.0	12.9	GE	15	15	15	14.6
	NP	24	68	NP	70	94	84	72
	NS	4	6	NS				
	LP	23	62	LP				
	LS	4	6	LS				
17	RS	35	23	RS	32	40	72	266
	SS	673	764	SS				
	GE	12.9	12.9	GE	13.9	13.2	13.4	14.6
	NP	56	87	NP	31	56	41	72
	NS	5	7	NS				
	LP	58	87	LP				
	LS	5	7	LS				
Class Means	CL	17	17	CL				
	SS	655	719	SS	31	38	68	252
	GE	12.6	12.9	GE	13.8	12.8	13.1	13.8
	NP	49	74	NP	28	48	33	65
	NS	5	6	NS				
	LP	51	70	LP				
	LS	5	6	LS				
	GR	292	290	GR				

Nelson-Denny

		MATH C & A	REF SKILLS	VOC	COMP	TOTAL V & C	READING RATE
1	RS	39	24	30	34	64	161
	SS	726	806				
	GE	12.9	12.9	13.6	11.5	12.8	7.0
	NP	76	94	26	33	27	11
	NS	6	8				
	LP	76	95				
	LS	6	8				
2	RS	32	18	19	38	57	278
	SS	638	627				
	GE	12.0	11.8	10.9	12.8	11.8	15.3
	NP	43	37	5	48	17	78
	NS	5	4				
	LP	44	28				
	LS	5	4				
3	RS	41	22	29	32	61	131
	SS	758	729				
	GE	12.9	12.9	13.5	10.8	12.5	6.0
	NP	85	78	23	26	21	3
	NS	7	7				
	LP	87	76				
	LS	7	6				
4	RS	37	19	32	44	76	182
	SS	698	649				
	GE	12.9	12.4	13.9	13.8	13.7	8.4
	NP	66	46	31	44	49	18
	NS	6	5				
	LP	65	36				
	LS	6	4				
5	RS	36	22	45	38	83	266
	SS	686	729				
	GE	12.9	12.9	15	12.8	14.2	14.6
	NP	61	78	66	48	58	72
	NS	6	7				
	LP	61	76				
	LS	6	6				

Nelson-Denny

		MATH C & A	REF SKILLS	VOC	COMP	TOTAL V & C	READING RATE
6	RS	38	21	44	46	90	241
	SS	711	701				
	GE	12.9	12.9	15	14.1	14.7	13.0
	NP	71	68	64	73	70	58
	NS	6	6				
	LP	70	62				
	LS	6	6				
7	RS	29	22	27	32	59	278
	SS	605	729				
	GE	10.9	12.9	13.1	10.8	12.1	15.3
	NP	31	78	17	26	19	78
	NS	4	7				
	LP	29	76				
	LS	4	6				
8	RS	31	15	17	32	49	278
	SS	627	568				
	GE	11.6	8.9	10.1	10.8	10.4	15.3
	NP	38	18	2	26	8	78
	NS	4	3				
	LP	38	10				
	LS	4	2				
9	RS	31	22	46	46	92	357
	SS	627	729				
	GE	11.6	12.9	15	14.1	14.9	15.3
	NP	38	78	67	73	72	95
	NS	4	7				
	LP	38	76				
	LS	4	6				
10	RS	29	21	40	56	96	387
	SS	605	701				
	GE	10.9	12.9	14.8	15.0	15.0	15.3
	NP	31	68	54	94	76	98
	NS	4	6				
	LP	29	62				
	LS	4	6				

				Nelson-Denny			
		MATH C & A	REF SKILLS	VOC	COMP	TOTAL V & C	READING RATE
11	RS	33	20	22	30	52	419
	SS	650	674				
	GE	12.5	12.9	11.7	10.0	10.9	15.3
	NP	47	57	7	20	10	99
	NS	5	5				
	LP	49	47				
	LS	5	5				
12	RS	33	19	23	30	53	161
	SS	650	649				
	GE	12.5	12.4	12.0	10.0	11.1	7.0
	NP	47	46	8	20	12	11
	NS	5	5				
	LP	49	36				
	LS	5	4				
13	RS	25	15	17	28	45	131
	SS	563	568				
	GE	9.3	8.9	10.1	9.3	9.7	6.0
	NP	18	18	2	15	4	3
	NS	3	3				
	LP	17	10				
	LS	3	2				
14	RS	19	20	18	22	40	195
	SS	501	674				
	GE	7.3	12.9	10.5	7.5	8.8	9.1
	NP	7	57	3	6	2	26
	NS	2	5				
	LP	8	47				
	LS	2	5				
15	RS	26	14	15	34	49	195
	SS	573	549				
	GE	9.6	7.8	9.2	11.5	10.4	9.1
	NP	20	14	1	33	8	26
	NS	3	3				
	LP	19	8				
	LS	3	2				

Nelson-Denny

		MATH C & A	REF SKILLS	VOC	COMP	TOTAL V & C	READING RATE
CLASS	CL	15	15				
	SS	641	672	28	36	64	241
MEANS	GE	12.1	12.9	13.3	12.2	12.8	13.0
	NP	44	56	20	40	27	58
	NS	5	5				
	LP	47	39				
	LS	5	4				
	GR	292	290				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	38	10	RS	4	12	16	105
	SS	711	476	SS				
	GE	12.9	4.2	GE	68	6.0	6.3	6.0
1)	NP	71	4	NP	1	1	1	1
	NS	6	1	NS				
	LP	70	2	LP				
	LS	6	1	LS				
	RS	32	20	RS	17	32	49	364
	SS	638	674	SS				
	GE	12.0	12.9	GE	10.1	10.8	10.4	15.3
2)	NP	43	57	NP	2	26	8	96
	NS	5	5	NS				
	LP	44	47	LP				
	LS	5	5	LS				
	RS	42	20	RS	42	32	74	230
	SS	779	674	SS				
	GE	12.9	12.9	GE	15	10.8	13.5	12.5
3)	NP	89	57	NP	59	26	45	52
	NS	7	5	NS				
	LP	91	47	LP				
	LS	8	5	LS				
	RS	39	20	RS	36	42	78	230
	SS	726	674	SS				
	GE	12.9	12.9	GE	14.4	13.5	13.9	12.3
4)	NP	76	57	NP	43	63	51	52
	NS	6	5	NS				
	LP	76	47	LP				
	LS	6	5	LS				
	RS	34	21	RS	23	14	37	207
	SS	661	701	SS				
	GE	12.9	12.9	GE	12.0	6.8	8.3	10.3
5)	NP	52	68	NP	8	2	2	34
	NS	5	6	NS				
	LP	53	62	LP				
	LS	5	6	LS				
	RS	39	24	RS	36	56	92	143
	SS	726	806	SS				
	GE	12.9	12.9	GE	14.4	15	14.9	6.0
6)	NP	76	94	NP	43	94	72	5
	NS	6	8	NS				
	LP	76	95	LP				
	LS	6	8	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	32	22	RS	38	54	92	266
	SS	638	729	SS				
	GE	12.0	12.9	GE	13.3	15	14.9	14.6
7)	NP	43	78	NP	48	92	72	72
	NS	5	7	NS				
	LP	44	76	LP				
	LS	5	6	LS				
	RS	38	21	RS	36	46	82	207
	SS	711	701	SS				
	GE	12.9	12.9	GE	14.4	14.1	14.1	10.3
8)	NP	71	68	NP	43	73	57	34
	NS	6	6	NS				
	LP	70	62	LP				
	LS	6	6	LS				
	RS	30	16	RS	49	32	81	219
	SS	617	588	SS				
	GE	11.3	10.2	GE	15	10.8	14.0	11.3
9)	NP	35	23	NP	73	26	56	43
	NS	4	4	NS				
	LP	34	15	LP				
	LS	4	3	LS				
	RS	37	21	RS	46	58	103	170
	SS	698	701	SS				
	GE	12.9	12.9	GE	15	15	15	7.7
10)	NP	66	68	NP	66	95	84	13
	NS	6	6	NS				
	LP	65	62	LP				
	LS	6	6	LS				
	CL	10	10	CL				
	SS	691	672	SS	33	39	70	219
	GE	12.9	12.9	GE				
Class	NP	63	56	NP	14.0	128	13.3	11.3
Means	NS	6	5	NS	34	50	37	43
	LP	63	39	LP				
	LS	6	4	LS				
	GR	292	290	GR				

P.E

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
1	RS	25	21	RS	28	26	54	252
	SS	563	701	SS				
	GE	9.3	12.9	GE	13.3	8.7	11.3	13.8
	NP	18	68	NP	20	11	13	65
	NS	3	6	NS				
	LP	17	62	LP				
	LS	3	6	LS				
2	RS	32	17	RS	19	38	57	182
	SS	638	606	SS				
	GE	12.0	11.0	GE	10.9	12.8	11.8	8.4
	NP	43	29	NP	5	48	17	18
	NS	5	4	NS				
	LP	44	20	LP				
	LS	5	3	LS				
3	RS	40	22	RS	27	40	67	241
	SS	741	729	SS				
	GE	12.9	12.9	GE	13.1	13.2	13.1	13.0
	NP	80	78	NP	17	56	32	58
	NS	7	7	NS				
	LP	82	76	LP				
	LS	7	6	LS				
4	RS	32	21	RS	38	40	78	387
	SS	638	701	SS				
	GE	12.0	12.9	GE	14.6	13.2	13.9	15.3
	NP	43	68	NP	48	56	51	98
	NS	5	6	NS				
	LP	44	62	LP				
	LS	5	6	LS				
5	RS	39	20	RS	23	34	57	266
	SS	726	674	SS				
	GE	12.9	12.9	GE	12.0	11.5	11.8	14.6
	NP	76	57	NP	8	83	11	72
	NS	6	5	NS				
	LP	76	47	LP				
	LS	6	5	LS				

P.E.

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
6	RS	24	19	RS	32	22	54	207
	SS	553	649	SS				
	GE	9.0	12.4	GE	13.9	7.5	11.3	10.3
	NP	15	46	NP	31	22	13	34
	NS	3	5	NS				
	LP	16	36	LP				
	LS	3	4	LS				
7	RS	39	17	RS	40	34	74	230
	SS	726	606	SS				
	GE	12.9	11.0	GE	14.8	11.5	13.6	12.3
	NP	76	29	NP	54	33	45	52
	NS	6	4	NS				
	LP	76	20	LP				
	LS	6	3	LS				
8	RS	41	20	RS	51	50	101	315
	SS	758	674	SS				
	GE	12.9	12.9	GE	15	14.7	15	15.3
	NP	85	57	NP	78	82	82	10
	NS	7	5	NS				
	LP	87	47	LP				
	LS	7	5	LS				
9	RS	30	18	RS	17	38	55	230
	SS	617	627	SS				
	GE	11.3	11.8	GE	10.1	12.8	11.5	12.3
	NP	35	37	NP	2	48	14	52
	NS	4	4	NS				
	LP	34	28	LP				
	LS	4	4	LS				
10	RS	27	12	RS	14	30	44	219
	SS	584	512	SS				
	GE	10.0	5.5	GE	8.9	10.0	9.5	11.3
	NP	24	8	NP	1	20	3	43
	NS	4	2	NS				
	LP	23	4	LP				
	LS	4	1	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
11	RS	36	23	RS	35	52	87	241
	SS	686	764	SS				
	GE	12.9	12.9	GE	14.3	15	14.5	13.0
	NP	61	87	NP	40	88	64	43
	NS	6	7	NS				
	LP	61	87	LP				
	LS	6	7	LS				
12	RS	27	20	RS	17	26	43	155
	SS	584	674	SS				
	GE	10.0	12.9	GE	10.1	8.7	9.3	6.5
	NP	24	57	NP	2	11	3	8
	NS	4	5	NS				
	LP	23	47	LP				
	LS	4	5	LS				
Class Means	CL	12	12	CL				
	SS	651	660	SS	28	39	64	241
	GE	12.5	12.7	GE	13.3	12.8	12.8	13.0
	NP	48	51	NP	20	48	27	58
	NS	5	5	NS				
	LP	51	39	LP				
	LS	5	4	LS				
	GR	292	290	GR				

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		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
1	RS	23	15	RS	26	30	56	161
	SS	543	568	SS				
	GE	8.7	8.9	GE	12.9	10.0	11.6	7.0
	NP	13	18	NP	15	20	15	11
	NS	3	3	NS				
	LP	14	10	LP				
	LS	3	2	LS				
2	RS	26	19	RS	16	22	38	161
	SS	573	649	SS				
	GE	9.6	12.4	GE	9.6	7.5	8.5	7.0
	NP	20	46	NP	2	6	2	11
	NS	3	5	NS				
	LP	19	36	LP				
	LS	3	4	LS				
3	RS	35	23	RS	62	34	96	195
	SS	673	764	SS				
	GE	12.9	12.9	GE	15	11.8	15	9.1
	NP	56	87	NP	92	33	76	26
	NS	5	7	NS				
	LP	58	87	LP				
	LS	5	7	LS				
4	RS	17	17	RS	28	36	64	278
	SS	477	606	SS				
	GE	6.3	11.0	GE	13.3	12.5	12.8	153
	NP	4	29	NP	20	40	27	78
	NS	1	4	NS				
	LP	5	20	LP				
	LS	2	3	LS				
5	RS	35	18	RS	18	30	48	278
	SS	673	627	SS				
	GE	12.9	11.8	GE	10.5	10.0	10.2	15.3
	NP	56	37	NP	3	20	7	78
	NS	5	4	NS				
	LP	58	28	LP				
	LS	5	4	LS				
6	RS	29	18	RS	21	26	47	241
	SS	605	627	SS				
	GE	10.9	11.8	GE	11.4	8.7	10.0	13.0
	NP	31	37	NP	7	11	6	58
	NS	4	4	NS				
	LP	29	28	LP				
	LS	4	4	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
7	RS	29	14	RS	25	30	55	207
	SS	605	549	SS				
	GE	10.9	7.8	GE	12.7	10.0	11.5	10.3
	NP	31	14	NP	13	20	14	34
	NS	4	3	NS				
	LP	29	8	LP				
	LS	4	2	LS				
8	RS	17	21	RS	51	52	107	357
	SS	477	701	SS				
	GE	6.3	12.9	GE	15	15	15	15.3
	NP	4	68	NP	78	88	57	95
	NS	1	6	NS				
	LP	5	62	LP				
	LS	2	6	LS				
9	RS	21	16	RS	27	40	67	301
	SS	522	588	SS				
	GE	8.1	10.2	GE	13.1	13.2	13.1	15.3
	NP	9	23	NP	17	56	32	87
	NS	2	4	NS				
	LP	11	15	LP				
	LS	3	3	LS				
10	RS	23	20	RS	26	12	48	182
	SS	543	674	SS				
	GE	8.7	12.9	GE	12.9	7.5	10.2	8.4
	NP	13	57	NP	15	22	7	18
	NS	3	5	NS				
	LP	14	47	LP				
	LS	3	5	LS				
11	RS	27	18	RS	18	32	50	207
	SS	584	627	SS				
	GE	10.0	11.8	GE	10.5	10.8	10.6	10.3
	NP	24	37	NP	3	26	8	54
	NS	4	4	NS				
	LP	23	28	LP				
	LS	4	4	LS				
12	RS	28	20	RS	26	30	56	170
	SS	594	674	SS				
	GE	10.5	12.9	GE	12.9	10.0	11.6	7.7
	NP	27	57	NP	15	20	15	13
	NS	4	5	NS				
	LP	26	47	LP				
	LS	4	5	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
13	RS	27	16	RS	27	30	57	195
	SS	584	588	SS				
	GE	10.0	10.2	GE	13.1	10.00	11.8	9.1
	NP	24	23	NP	17	20	17	26
	NS	4	4	NS				
	LP	23	15	LP				
	LS	4	3	LS				
14	RS	27	20	RS	21	28	49	315
	SS	584	674	SS				
	GE	10.0	12.9	GE	11.4	9.3	10.4	15.3
	NP	24	57	NP	7	15	8	90
	NS	4	5	NS				
	LP	23	47	LP				
	LS	4	5	LS				
15	RS	26	17	RS	25	38	63	301
	SS	573	606	SS				
	GE	9.6	11.0	GE	12.7	12.8	12.7	15.3
	NP	20	29	NP	13	48	25	87
	NS	3	4	NS				
	LP	19	20	LP				
	LS	3	3	LS				
16	RS	14	7	RS	13	24	37	155
	SS	445	418	SS				
	GE	5.2	2.5	GE	8.6	8.1	8.3	6.5
	NP	2	2	NP	1	8	2	8
	NS	1	1	NS				
	LP	3	1	LP				
	LS	1	1	LS				
17	RS	29	13	RS	28	34	62	230
	SS	605	530	SS				
	GE	10.9	6.4	GE	13.3	11.5	12.6	12.3
	NP	31	10	NP	20	33	23	52
	NS	4	2	NS				
	LP	29	5	LP				
	LS	4	2	LS				
18	RS	32	21	RS	43	44	87	252
	SS	638	701	SS				
	GE	12.0	12.9	GE	15	13.8	14.5	13.8
	NP	43	68	NP	63	69	64	65
	NS	5	6	NS				
	LP	44	62	LP				
	LS	5	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
19	RS	20	17	RS	30	32	62	219
	SS	511	606	SS				
	GE	7.8	11.0	GE	13.6	10.8	12.6	11.3
	NP	8	29	NP	26	26	23	43
	NS	2	4	NS				
	LP	9	20	LP				
	LS	2	3	LS				
20	RS	29	17	RS	16	32	48	161
	SS	605	606	SS				
	GE	10.9	11.0	GE	9.6	10.8	10.2	7.0
	NP	31	29	NP	2	26	7	11
	NS	4	4	NS				
	LP	29	20	LP				
	LS	4	3	LS				
21	RS	31	23	RS	44	42	86	252
	SS	627	764	SS				
	GE	11.6	12.9	GE	15	13.5	14.4	13.8
	NP	38	87	NP	64	63	62	65
	NS	4	7	NS				
	LP	38	87	LP				
	LS	4	7	LS				
22	RS	36	20	RS	19	28	47	291
	SS	686	674	SS				
	GE	12.9	12.9	GE	10.9	9.3	10.0	15.3
	NP	61	57	NP	5	15	6	83
	NS	6	5	NS				
	LP	61	47	LP				
	LS	6	5	LS				
23	RS	16	14	RS	14	22	36	161
	SS	466	549	SS				
	GE	6.0	7.8	GE	8.9	7.5	8.1	7.0
	NP	3	14	NP	1	6	2	11
	NS	1	3	NS				
	LP	4	8	LP				
	LS	1	2	LS				
24	RS	25	16	RS	12	22	34	182
	SS	563	588	SS				
	GE	9.3	10.2	GE	8.3	7.5	7.7	8.4
	NP	18	23	NP	1	6	1	18
	NS	3	4	NS				
	LP	17	15	LP				
	LS	3	3	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
25	RS	23	17	RS	41	38	79	419
	SS	543	606	SS				
	GE	8.7	11.0	GE	14.9	12.8	13.9	15.3
	NP	13	29	NP	56	48	53	99
	NS	3	4	NS				
	LP	14	20	LP				
	LS	3	3	LS				
26	RS	30	19	RS	23	28	51	170
	SS	617	649	SS				
	GE	11.3	12.4	GE	12.0	9.3	10.7	7.7
	NP	35	46	NP	8	15	9	13
	NS	4	5	NS				
	LP	34	36	LP				
	LS	4	4	LS				
27	RS	31	19	RS	20	32	52	195
	SS	627	649	SS				
	GE	11.6	12.4	GE	11.1	10.8	10.9	9.1
	NP	38	46	NP	6	26	10	36
	NS	4	5	NS				
	LP	38	36	LP				
	LS	4	4	LS				
28	RS	22	18	RS	13	20	33	170
	SS	532	627	SS				
	GE	8.4	11.8	GE	8.6	7.0	7.5	7.7
	NP	11	37	NP	1	5	1	13
	NS	3	4	NS				
	LP	13	28	LP				
	LS	3	4	LS				
29	RS	31	23	RS	28	32	60	155
	SS	627	764	SS				
	GE	11.6	12.9	GE	13.3	10.8	12.3	6.5
	NP	38	87	NP	20	26	20	8
	NS	4	7	NS				
	LP	38	87	LP				
	LS	4	7	LS				
30	RS	27	22	RS	25	28	53	195
	SS	584	729	SS				
	GE	10.0	12.9	GE	12.7	9.3	11.1	9.1
	NP	24	78	NP	13	15	12	26
	NS	4	7	NS				
	LP	23	76	LP				
	LS	4	6	LS				

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		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
Class Means	CL	30	30	CL				
	SS	576	633	SS	26	31	58	219
	GE	9.7	11.9	GE	12.9	10.4	12.0	11.3
	NP	21	39	NP	15	23	18	43
	NS	3	4	NS				
	LP	20	33	LP				
	LS	3	4	LS				
	GR	292	290	GR				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
1	RS	20	21	RS	59	34	92	219
	SS	511	701	SS				
	GE	7.8	12.9	GE	15	11.5	14.9	11.3
	NP	8	68	NP	90	33	72	43
	NS	2	6	NS				
	LP	9	62	LP				
	LS	2	6	LS				
2	RS	22	14	RS	27	30	57	230
	SS	532	549	SS				
	GE	8.4	7.8	GE	13.1	10.0	11.8	12.3
	NP	11	14	NP	17	20	17	52
	NS	3	3	NS				
	LP	13	8	LP				
	LS	3	2	LS				
3	RS	17	13	RS	17	20	37	182
	SS	477	530	SS				
	GE	6.3	6.4	GE	10.1	7.0	8.3	8.4
	NP	4	10	NP	2	5	2	18
	NS	1	2	NS				
	LP	5	5	LP				
	LS	2	2	LS				
4	RS	22	13	RS	17	28	45	207
	SS	532	530	SS				
	GE	8.4	6.4	GE	10.1	9.3	9.7	10.3
	NP	11	10	NP	2	15	4	34
	NS	3	2	NS				
	LP	13	5	LP				
	LS	3	2	LS				
Class Means	CL	4	4	CL				
	SS	513	578	SS	30	28	58	207
	GE	7.8	9.5	GE	13.6	9.3	12.0	10.3
	NP	8	20	NP	26	15	18	34
	NS	2	3	NS				
	LP	10	12	LP				
	LS	2	3	LS				
	GR	292	290	GR				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
1)	RS	25	22	RS	34	42	76	241
	SS	563	729	SS				
	GE	9.3	12.9	GE	14.2	13.5	13.7	13.0
	NP	18	78	NP	37	63	49	58
	NS	3	7	NS				
	LP	17	76	LP				
	LS	3	6	LS				
2)	RS	27	13	RS	23	38	61	278
	SS	584	530	SS				
	GE	10.0	6.4	GE	12.0	12.8	12.5	15.3
	NP	24	10	NP	8	48	21	78
	NS	4	2	NS				
	LP	23	5	LP				
	LS	4	2	LS				
3)	RS	18	16	RS	22	30	52	252
	SS	489	588	SS				
	GE	6.7	10.2	GE	11.7	10.1	10.9	13.8
	NP	5	23	NP	7	20	10	65
	NS	2	4	NS				
	LP	7	15	LP				
	LS	2	3	LS				
4)	RS	33	21	RS	33	34	67	182
	SS	650	701	SS				
	GE	12.5	12.9	GE	14.0	11.8	13.1	8.4
	NP	47	68	NP	34	33	32	18
	NS	5	6	NS				
	LP	49	62	LP				
	LS	5	6	LS				
5)	RS	27	18	RS	26	44	70	161
	SS	584	627	SS				
	GE	10.0	11.8	GE	12.9	13.8	13.0	7.0
	NP	24	37	NP	15	69	37	11
	NS	4	4	NS				
	LP	23	28	LP				
	LS	4	4	LS				

		Canadian Achievement					Nelson - Denny	
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
6	RS	16	10	RS	44	52	97	301
	SS	466	476	SS				
	GE	6.0	4.2	GE	15	15	15	15.3
	NP	3	4	NP	66	88	77	87
	NS	1	1	NS				
	LP	4	2	LP				
	LS	1	1	LS				
7	RS	40	17	RS	40	50	90	241
	SS	741	606	SS				
	GE	12.9	11.0	GE	14.8	14.7	14.7	13.0
	NP	80	29	NP	54	82	70	58
	NS	7	4	NS				
	LP	82	20	LP				
	LS	7	3	LS				
8	RS	31	20	RS	40	44	84	350
	SS	627	674	SS				
	GE	11.6	12.9	GE	14.8	13.8	14.2	15.3
	NP	38	57	NP	54	69	60	94
	NS	4	5	NS				
	LP	38	47	LP				
	LS	4	5	LS				
9	RS	30	21	RS	48	42	90	337
	SS	617	701	SS				
	GE	11.3	12.9	GE	15	13.5	14.7	15.3
	NP	35	68	NP	71	63	70	93
	NS	4	6	NS				
	LP	34	62	LP				
	LS	4	6	LS				
10	RS	43	24	RS	34	48	82	266
	SS	804	806	SS				
	GE	12.9	12.9	GE	14.2	14.4	14.1	14.6
	NP	93	94	NP	37	77	57	72
	NS	8	8	NS				
	LP	96	95	LP				
	LS	9	8	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
11	RS	37	20	RS	31	38	69	278
	SS	698	674	SS				
	GE	12.9	12.9	GE	13.8	12.8	13.2	15.3
	NP	66	57	NP	28	48	35	78
	NS	6	5	NS				
	LP	65	47	LP				
	LS	6	5	LS				
12	RS	39	22	RS	42	46	86	219
	SS	726	729	SS				
	GE	12.9	12.9	GE	15	14.1	14.4	11.3
	NP	76	78	NP	52	73	62	43
	NS	6	7	NS				
	LP	76	76	LP				
	LS	6	6	LS				
13	RS	35	17	RS	32	54	86	195
	SS	673	606	SS				
	GE	12.9	11.0	GE	13.9	15	14.4	9.1
	NP	56	29	NP	31	92	62	26
	NS	5	4	NS				
	LP	58	20	LP				
	LS	5	3	LS				
14	RS	36	21	RS	62	44	106	241
	SS	686	701	SS				
	GE	12.9	12.9	GE	15	13.8	15	13.0
	NP	61	68	NP	92	69	87	58
	NS	6	6	NS				
	LP	61	62	LP				
	LS	6	6	LS				
Class Mean	CL	14	14	CL				
	SS	636	653	SS	37	43	80	241
	GE	12.0	12.6	GE	14.5	13.7	14.0	13.0
	NP	42	48	NP				
	NS	5	5	NS				
	LP	41	39	LP				
	LS	5	4	LS				
	GR	292	290	GR				
		12.9	12.9		15	15	15	15.3
		1	1		1	1	1	1
		6.0	4.2		11.7	10.1	10.9	7.0

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	44	23	RS	25	36	61	182
	SS	832	764	SS				
	GE	12.9	12.9	GE	12.7	12.2	12.5	8.4
1)	NP	97	87	NP	13	40	21	18
	NS	9	7	NS				
	LP	98	87	LS				
	LS	9	7					
	RS	41	23	RS	59	60	119	357
	SS	758	764	SS				
	GE	12.9	12.9	GE	15	15	15	15.3
2)	NP	5	87	NP	91	97	94	95
	NS	7	7	NS				
	LP		87	LP				
	LS	7	7	LS				
	RS	39	20	RS	40	40	80	241
	SS	726	674	SS				
	GE	12.9	12.9	GE	14.8	13.2	14.0	13
3)	NP	76	57	NP	54	56	55	58
	NS	6	5	NS				
	LP	76	47	LP				
	LS	6	5	LS				
	RS	29	21	RS	19	28	47	399
	SS	605	701	SS				
	GE	10.9	12.9	GE	10.9	9.3	10.0	15.3
4)	NP	31	68	NP	4	15	6	98
	NS	4	6	NS				
	LP	29	62	LP				
	LS	4	6	LS				
	RS	36	22	RS	29	38	67	230
	SS	686	729	SS				
	GE	12.9	12.9	GE	13.5	12.8	13.1	12.3
5)	NP	61	78	NP	23	48	32	52
	NS	6	7	NS				
	LP	61	76	LP				
	LS	6	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
6	RS	33	19	RS	21	42	63	301
	SS	650	649	SS				
	GE	12.5	12.4	GE	11.4	13.5	12.7	15.3
	NP	47	46	NP	7	63	25	87
	NS	5	5	NS				
	LP	49	36	LP				
	LS	5	4	LS				
7	RS	38	22	RS	15	22	37	170
	SS	711	729	SS				
	GE	12.9	12.9	GE	9.2	7.5	8.3	7.7
	NP	71	78	NP	1	6	1	13
	NS	6	7	NS				
	LP	70	76	LP				
	LS	6	6	LS				
8	RS	39	22	RS	45	58	103	337
	SS	726	729	SS				
	GE	12.9	12.9	GE	15	15	15	15.3
	NP	76	78	NP	66	95	84	93
	NS	6	7	NS				
	LP	76	76	LP				
	LS	6	6	LS				
9	RS	37	18	RS	32	46	78	278
	SS	698	627	SS				
	GE	12.9	11.8	GE	13.9	14.1	13.9	15.3
	NP	66	37	NP	31	73	51	78
	NS	6	4	NS				
	LP	65	28	LP				
	LS	6	4	LS				
10	RS	34	18	RS	49	44	93	207
	SS	661	627	SS				
	GE	12.9	11.8	GE	15	13.8	14.9	10.3
	NP	52	37	NP	73	69	74	34
	NS	5	4	NS				
	LP	53	28	LP				
	LS	5	4	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
11	RS	35	21	RS	45	56	101	230
	SS	673	701	SS				
	GE	12.9	12.9	GE	14.8	15	15	12.3
	NP	56	68	NP	66	94	82	52
	NS	5	6	NS				
	LP	58	62	LP				
	LS	5	6	LS				
12	RS	42	23	RS	30	44	74	241
	SS	779	764	SS				
	GE	12.9	12.9	GE	13.6	13.8	13.6	13.0
	NP	89	87	NP	26	69	43	58
	NS	7	7	NS				
	LP	91	87	LP				
	LS	8	7	LS				
13	RS	43	18	RS	34	44	78	315
	SS	804	627	SS				
	GE	12.9	11.8	GE	14.2	13.8	13.9	15.3
	NP	93	37	NP	37	69	51	90
	NS	8	4	NS				
	LP	96	28	LP				
	LS	9	4	LS				
14	RS	36	17	RS	32	38	70	266
	SS	686	606	SS				
	GE	12.9	11.0	GE	13.9	12.8	13.3	14.6
	NP	61	29	NP	31	48	37	72
	NS	6	4	NS				
	LP	61	20	LP				
	LS	6	3	LS				
15	RS	33	23	RS	43	36	79	195
	SS	650	764	SS				
	GE	12.5	12.9	GE	15	12.0	13.9	9.1
	NP	47	87	NP	62	40	53	26
	NS	5	7	NS				
	LP	49	87	LP				
	LS	5	7	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
16	RS	38	21	RS	25	34	59	161
	SS	711	701	SS				
	GE	12.9	12.9	GE	12.7	11.5	12.1	7.0
	NP	71	68	NP	13	35	19	11
	NS	6	6	NS				
	LP	70	62	LP				
	LS	6	6	LS				
17	RS	35	20	RS	41	32	73	241
	SS	673	674	SS				
	GE	12.9	12.9	GE	14.9	10.8	13.5	13.0
	NP	56	57	NP	56	26	43	58
	NS	5	5	NS				
	LP	58	47	LP				
	LS	5	5	LS				
18	RS	30	13	RS	13	14	27	219
	SS	617	530	SS				
	GE	11.3	6.4	GE	8.6	6.0	6.4	11.3
	NP	35	10	NP	1	2	1	43
	NS	4	2	NS				
	LP	34	5	LP				
	LS	4	2	LS				
19	RS	36	20	RS	38	48	86	315
	SS	686	674	SS				
	GE	12.9	12.9	GE	14.6	14.4	14.4	15.3
	NP	61	57	NP	48	77	62	90
	NS	6	5	NS				
	LP	61	47	LP				
	LS	6	5	LS				
20	RS	32	22	RS	29	26	55	182
	SS	638	729	SS				
	GE	12.0	12.9	GE	13.5	8.7	11.5	8.4
	NP	43	78	NP	23	11	14	18
	NS	5	7	NS				
	LP	44	76	LP				
	LS	5	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
21	RS	44	18	RS	13	24	37	207
	SS	832	627	SS				
	GE	12.9	11.8	GE	8.6	8.1	8.3	10.3
	NP	97	37	NP	1	8	2	34
	NS	9	4	NS				
	LP	98	28	LP				
	LS	9	4	LS				
22	RS	42	20	RS	17	34	51	182
	SS	779	674	SS				
	GE	12.9	12.9	GE	10.1	11.8	10.7	8.4
	NP	89	57	NP	2	33	9	18
	NS	7	5	NS				
	LP	91	47	LP				
	LS	8	5	LS				
23	RS	44	21	RS	18	28	46	207
	SS	832	701	SS				
	GE	12.9	12.9	GE	10.5	9.3	9.8	10.3
	NP	97	68	NP	3	15	5	34
	NS	9	6	NS				
	LP	98	62	LP				
	LS	9	6	LS				
24	RS	38	22	RS	36	50	86	301
	SS	711	729	SS				
	GE	12.9	12.9	GE	14.4	14.7	14.4	15.3
	NP	71	78	NP	43	82	62	87
	NS	6	7	NS				
	LP	70	76	LP				
	LS	6	6	LS				
25	RS	41	21	RS	12	20	32	207
	SS	758	701	SS				
	GE	12.9	12.9	GE	8.3	7.0	7.3	10.3
	NP	85	68	NP	1	5	1	34
	NS	7	6	NS				
	LP	87	62	LP				
	LS	7	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
26	RS	43	23	RS	50	40	90	241
	SS	804	764	SS				
	GE	12.9	12.9	GE	15	13.2	14.7	13.0
	NP	93	87	NP	79	56	70	58
	NS	8	7	NS				
	LP	96	87	LP				
	LS	9	7	LS				
27	RS	41	22	RS	46	44	90	278
	SS	758	729	SS				
	GE	12.9	12.9	GE	15	13.8	14.7	15.3
	NP	85	78	NP	67	69	70	78
	NS	7	7	NS				
	LP	87	76	LP				
	LS	7	6	LS				
28	RS	39	22	RS	34	52	86	241
	SS	726	729	SS				
	GE	12.9	12.9	GE	14.2	15	14.4	13.0
	NP	76	78	NP	37	88	62	58
	NS	6	7	NS				
	LP	76	76	LP				
	LS	6	6	LS				
29	RS	40	21	RS	27	58	85	315
	SS	741	701	SS				
	GE	12.9	12.9	GE	13.1	15	14.3	15.3
	NP	80	68	NP	17	95	61	90
	NS	7	6	NS				
	LP	82	62	LP				
	LS	7	6	LS				
30	RS	43	22	RS	23	32	55	207
	SS	804	729	SS				
	GE	12.9	12.9	GE	12.6	10.8	11.5	10.3
	NP	93	78	NP	8	26	14	34
	NS	8	7	NS				
	LP	96	76	LP				
	LS	9	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	34	22	RS	17	30	47	155
	SS	661	729	SS				
	GE	12.9	12.9	GE	10.1	10.0	10.0	6.5
31	NP	52	78	NP	2	20	6	8
	NS	5	7	NS				
	LP	53	76	LP				
	LS	5	6	LS				
	RS	39	20	RS	42	36	78	182
	SS	726	674	SS				
	GE	12.9	12.9	GE	15	12.2	13.9	8.4
32	NP	76	57	NP	59	40	51	18
	NS	6	5	NS				
	LP	76	47	LP				
	LS	6	5	LS				
	RS	32	21	RS	37	44	81	278
	SS	638	701	SS				
	GE	12.0	12.9	GE	14.5	13.8	14.0	15.3
33	NP	43	68	NP	46	69	56	78
	NS	5	6	NS				
	LP	44	62	LP				
	LS	5	6	LS				
	RS	30	18	RS	24	36	60	105
	SS	617	627	SS				
	GE	11.3	11.8	GE	12.4	12.2	12.3	6.0
34	NP	35	37	NP	10	40	20	1
	NS	4	4	NS				
	LP	34	28	LP				
	LS	4	4	LS				
	RS	40	20	RS	40	38	78	241
	SS	741	674	SS				
	GE	12.9	12.9	GE	14.8	12.8	13.9	13.0
35	NP	80	57	NP	54	48	51	51
	NS	7	5	NS				
	LP	82	47	LP				
	LS	7	5	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
36	RS	41	22	RS	36	36	72	182
	SS	758	729	SS				
	GE	12.9	12.9	GE	14.4	12.2	13.1	8.4
	NP	85	78	NP	43	40	41	18
	NS	7	7	NS				
	LP	87	76	LP				
	LS	7	6	LS				
37	RS	42	21	RS	20	32	52	207
	SS	779	701	SS				
	GE	12.9	12.9	GE	11.1	10.8	10.9	10.3
	NP	89	68	NP	4	26	10	34
	NS	7	6	NS				
	LP	91	62	LP				
	LS	8	6	LS				
38	RS	31	23	RS	36	40	76	291
	SS	627	764	SS				
	GE	11.6	12.9	GE	14.4	12.2	13.7	15.3
	NP	38	87	NP	40	56	49	83
	NS	4	7	NS				
	LP	38	87	LP				
	LS	4	7	LS				
39	RS	33	21	RS	23	24	47	325
	SS	650	701	SS				
	GE	12.5	12.9	GE	12.0	8.1	10.0	15.3
	NP	47	68	NP	8	8	6	91
	NS	5	6	NS				
	LP	49	62	LP				
	LS	5	6	LS				
40	RS	36	22	RS	32	24	56	195
	SS	686	729	SS				
	GE	12.9	12.9	GE	13.9	8.1	11.6	9.1
	NP	61	78	NP	31	8	15	26
	NS	6	7	NS				
	LP	61	76	LP				
	LS	6	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
41	RS	40	18	RS	22	30	52	219
	SS	741	627	SS				
	GE	12.9	11.8	GE	11.7	10.0	10.9	11.3
	NP	80	37	NP	7	20	10	43
	NS	7	4	NS				
	LP	82	28	LP				
	LS	7	4	LS				
42	RS	38	22	RS	44	50	94	207
	SS	711	729	SS				
	GE	12.9	12.9	GE	15	14.7	15	10.3
	NP	71	78	NP	65	82	75	34
	NS	6	7	NS				
	LP	70	76	LP				
	LS	6	6	LS				
43	RS	34	13	RS	13	22	35	195
	SS	661	530	SS				
	GE	12.9	6.4	GE	8.6	7.5	7.9	9.1
	NP	52	10	NP	1	5	2	26
	NS	5	2	NS				
	LP	53	5	LP				
	LS	5	2	LS				
44	RS	39	25	RS	29	56	95	301
	SS	726	860	SS				
	GE	12.9	12.9	GE	13.5	15	15	15.3
	NP	76	99	NP	23	94	76	87
	NS	6	9	NS				
	LP	76	99	LP				
	LS	6	9	LS				
45	RS	39	23	RS	30	36	66	241
	SS	726	764	SS				
	GE	12.9	12.9	GE	13.6	12.2	13.0	13.0
	NP	76	87	NP	26	40	30	58
	NS	6	7	NS				
	LP	76	87	LP				
	LS	6	7	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
46	RS	40	24	RS	34	58	92	325
	SS	741	806	SS				
	GE	12.9	12.9	GE	14.2	15	14.9	15.3
	NP	80	94	NP	37	95	72	91
	NS	7	8	NS				
	LP	82	95	LP				
	LS	7	8	LS				
47	RS	37	21	RS	25	40	65	252
	SS	698	701	SS				
	GE	12.9	12.9	GE	12.7	13.2	12.9	13.8
	NP	66	68	NP	13	54	29	65
	NS	6	6	NS				
	LP	65	62	LP				
	LS	6	6	LS				
Class Means	CL	47	47	CL				
	SS	715	700	SS	31	38	69	230
	GE	12.9	12.9	GE	13.8	12.8	13.2	12.3
	NP	72	67	NP	28	48	35	52
	NS	6	6	NS				
	LP	72	53	LP				
	LS	6	5	LS				
	GR	292	290	GR				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
1)	RS	34	17	RS	47	30	77	366
	SS	661	606	SS				
	GE	12.9	11.0	GE	15	10	13.8	15.3
	NP	52	29	NP	70	20	50	96
	NS	5	4	NS				
	LP	53	20	LP				
	LS	5	3	LS				
2)	RS	38	15	RS	17	32	49	143
	SS	711	568	SS				
	GE	12.9	8.9	GE	10.1	10.8	10.4	6.0
	NP	71	18	NP	2	26	8	5
	NS	6	3	NS				
	LP	70	10	LP				
	LS	6	2	LS				
3)	RS	43	24	RS	34	44	78	266
	SS	804	806	SS				
	GE	12.9	12.9	GE	14.2	13.8	13.9	14.6
	NP	93	94	NP	37	69	51	72
	NS	8	8	NS				
	LP	96	95	LP				
	LS	9	8	LS				
4)	RS	38	25	RS	18	30	48	143
	SS	711	860	SS				
	GE	12.9	12.9	GE	10.5	10.0	10.2	6.0
	NP	71	99	NP	3	20	7	5
	NS	6	9	NS				
	LP	70	99	LP				
	LS	6	9	LS				
5)	RS	18	16	RS	14	34	48	252
	SS	489	588	SS				
	GE	6.7	10.2	GE	8.9	11.5	10.2	13.8
	NP	5	23	NP	1	33	7	65
	NS	2	4	NS				
	LP	7	15	LP				
	LS	2	3	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
6	RS	31	19	RS	20	26	46	387
	SS	627	649	SS				
	GE	11.6	12.4	GE	11.1	8.7	9.8	15.3
	NP	38	46	NP	6	11	5	98
	NS	4	5	NS				
	LP	38	36	LP				
	LS	4	4	LS				
7	RS	34	21	RS	39	46	85	325
	SS	661	701	SS				
	GE	12[illegible]	12.9	GE	14.7	14.1	14.3	15.3
	NP	[illegible]	68	NP	50	73	61	91
	NS	5	6	NS				
	LP	53	62	LP				
	LS	5	6	LS				
8	RS	23	16	RS	26	34	60	430
	SS	543	588	SS				
	GE	8.7	10.2	GE	12.9	11.8	12.3	15.3
	NP	13	23	NP	15	33	20	99
	NS	3	4	NS				
	LP	14	15	LP				
	LS	3	3	LS				
9	RS	34	20	RS	28	34	62	268
	SS	661	674	SS				
	GE	12.9	12.9	GE	13.3	11.8	12.6	14.6
	NP	52	57	NP	20	33	23	72
	NS	5	5	NS				
	LP	53	47	LP				
	LS	5	5	LS				
10	RS	37	20	RS	44	38	82	499
	SS	698	674	SS				
	GE	12.9	12.9	GE	15	12.8	14.1	15.3
	NP	66	57	NP	64	48	57	99
	NS	6	5	NS				
	LP	65	47	LP				
	LS	6	5	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
11	RS	37	20	RS	33	40	73	131
	SS	698	674	SS				
	GE	12.9	12.9	GE	14.0	13.2	13.5	6.0
	NP	66	57	NP	34	56	43	3
	NS	6	5	NS				
	LP	65	47	LP				
	LS	6	5	LS				
12	RS	23	21	RS	38	32	70	155
	SS	543	701	SS				
	GE	8.7	12.9	GE	14.6	10.8	13.3	6.5
	NP	13	68	NP	48	26	37	8
	NS	3	6	NS				
	LP	14	62	LP				
	LS	3	6	LS				
13	RS	33	23	RS	14	32	46	252
	SS	650	764	SS				
	GE	12.5	12.9	GE	8.9	10.8	9.8	13.8
	NP	47	87	NP	1	26	5	65
	NS	5	7	NS				
	LP	49	87	LP				
	LS	5	7	LS				
14	RS	32	22	RS	54	42	96	230
	SS	638	729	SS				
	GE	12.0	12.9	GE	15	13.5	15	12.3
	NP	43	78	NP	82	63	76	52
	NS	5	7	NS				
	LP	44	76	LP				
	LS	5	6	LS				
15	RS	28	20	RS	18	22	40	182
	SS	594	674	SS				
	GE	10.5	12.9	GE	10.5	7.5	8.8	11.3
	NP	27	57	NP	3	6	2	18
	NS	4	5	NS				
	LP	26	47	LP				
	LS	4	5	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
16	RS	27	21	RS	27	26	53	195
	SS	584	701	SS				
	GE	10.0	12.9	GE	13.1	8.7	11.1	9.1
	NP	24	68	NP	17	11	12	12
	NS	4	6	NS				
	LP	23	62	LP				
	LS	4	6	LS				
17	RS	44	23	RS	24	44	68	350
	SS	832	764	SS				
	GE	12.9	12.9	GE	12.4	13.8	13.1	15.3
	NP	97	87	NP	10	69	33	94
	NS	9	7	NS				
	LP	98	87	LP				
	LS	9	7	LS				
18	RS	40	21	RS	17	32	49	291
	SS	741	701	SS				
	GE	12.9	12.9	GE	10.4	10.8	10.4	15.3
	NP	80	68	NP	2	26	8	83
	NS	7	6	NS				
	LP	82	62	LP				
	LS	7	6	LS				
19	RS	40	24	RS	44	46	90	325
	SS	741	806	SS				
	GE	12.9	12.9	GE	15	14.1	14.7	15.3
	NP	80	94	NP	64	73	70	91
	NS	7	8	NS				
	LP	82	95	LP				
	LS	7	8	LS				
20	RS	27	19	RS	24	24	48	291
	SS	584	649	SS				
	GE	10.0	12.4	GE	12.4	8.1	10.2	15.3
	NP	24	46	NP	10	8	7	83
	NS	4	5	NS				
	LP	23	36	LP				
	LS	4	4	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
21	RS	32	21	RS	28	44	72	278
	SS	638	701	SS				
	GE	12.0	12.9	GE	13.3	13.8	13.4	15.3
	NP	43	68	NP	20	69	41	78
	NS	5	6	NS				
	LP	44	62	LP				
	LS	5	6					
22	RS	29	20	RS	14	28	42	207
	SS	605	674	SS				
	GE	10.9	12.9	GE	8.9	9.3	9.1	10.3
	NP	31	57	NP	1	15	3	34
	NS	4	5	NS				
	LP	29	47	LP				
	LS	4	5	LS				
23	RS	35	21	RS	25	36	61	350
	SS	673	701	SS				
	GE	12.9	12.9	GE	12.7	12.2	12.5	15.3
	NP	56	68	NP	13	40	21	94
	NS	5	6	NS				
	LP	58	62	LP				
	LS	5	6	LS				
24	RS	14	11	RS	17	24	41	291
	SS	445	494	SS				
	GE	5.2	4.7	GE	10.1	8.1	8.9	15.3
	NP	2	6	NP	2	8	3	83
	NS	1	2	NS				
	LP	3	3	LP				
	LS	1	1	LS				
25	RS	39	22	RS	32	38	70	364
	SS	726	729	SS				
	GE	12.9	12.9	GE	139	12.8	13.3	15.3
	NP	76	78	NP	31	48	37	96
	NS	6	7	NS				
	LP	76	76	LP				
	LS	6	6	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
	RS	33	21	RS	40	48	88	266
	SS	650	701	SS				
	GE	12.5	12.9	GE	14.8	14.4	14.5	14.6
26	NP	47	68	NP	54	77	65	72
	NS	5	6	NS				
	LP	49	62	LP				
	Ls	5	6	LS				
	CL	26	26	CL	28	35	63	278
	SS	650	688	SS				
	GE	12.5	12.9	GE	13.3	12.0	12.7	15.3
Class	NP	47	62	NP				
Mean	NS	5	6	NS				
	LP	49	53	LP				
	LS	5	5	LS				
	GR	292	290	GR				

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		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
1)	RS	39	24	RS	59	48	107	575
	SS	726	806	SS				
	GE	12.9	12.9	GE	15	14.4	15	15.3
	NP	76	94	NP	91	77	87	99
	NS	6	8	NS				
	LP	76	95	LP				
	LS	6	8	LS				
2)	RS	41	20	RS	22	38	60	155
	SS	758	674	SS				
	GE	12.9	12.9	GE	11.7	12.8	12.3	6.5
	NP	85	57	NP	7	48	20	7
	NS	7	5	NS				
	LP	87	47	LP				
	LS	7	5	LS				
3)	RS	41	21	RS	24	32	56	170
	SS	758	701	SS				
	GE	12.9	12.9	GE	12.4	10.8	11.6	7.7
	NP	85	68	NP	10	26	15	13
	NS	7	6	NS				
	LP	87	62	LP				
	LS	7	6	LS				
4)	RS	33	19	RS	36	32	68	241
	SS	650	649	SS				
	GE	12.5	12.4	GE	14.3	10.8	13.1	13.0
	NP	47	46	NP	43	26	33	58
	NS	5	5	NS				
	LP	49	36	LP				
	LS	5	4	LS				
5)	RS	42	25	RS	42	48	90	195
	SS	779	860	SS				
	GE	12.9	12.9	GE	15	14.4	14.7	9.1
	NP	89	99	NP	59	77	70	26
	NS	7	9	NS				
	LP	91	99	LP				
	LS	8	9	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
6	RS	42	21	RS	29	44	73	364
	SS	779	701	SS				
	GE	12.9	12.9	GE	13.5	13.8	13.5	15.3
	NP	89	68	NP	23	69	43	96
	NS	7	6	NS				
	LP	91	62	LP				
	LS	8	6	LS				
7	RS	42	23	RS	47	46	93	387
	SS	779	764	SS				
	GE	12.9	12.9	GE	15	14.1	14.9	15.3
	NP	89	87	NP	70	73	74	98
	NS	7	7	NS				
	LP	91	87	LP				
	LS	8	7	LS				
8	RS	43	19	RS	28	42	70	325
	SS	804	649	SS				
	GE	12.9	12.4	GE	13.3	13.5	13.3	15.3
	NP	93	46	NP	20	63	37	91
	NS	8	5	NS				
	LP	96	36	LP				
	LS	9	4	LS				
9	RS	43	22	RS	58	54	106	301
	SS	804	729	SS				
	GE	12.9	12.9	GE	15	15	15	15.3
	NP	93	78	NP	80	92	86	81
	NS	8	7	NS				
	LP	96	76	LP				
	LS	9	6	LS				
10	RS	40	19	RS	50	52	102	409
	SS	741	649	SS				
	GE	12.9	12.4	GE	15	15	15	15.3
	NP	80	46	NP	75	88	83	98
	NS	7	5	NS				
	LP	82	36	LP				
	LS	7	4	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
11	RS	34	23	RS	13	28	41	207
	SS	661	764	SS				
	GE	12.9	12.9	GE	8.6	9.3	8.9	10.3
	NP	52	87	NP	1	15	3	34
	NS	5	7	NS				
	LP	53	87	LP				
	LS	5	7	LS				
12	RS	43	23	RS	47	46	93	291
	SS	804	764	SS				
	GE	12.9	12.9	GE	15	14.1	14.9	15.3
	NP	93	87	NP	70	73	74	81
	NS	8	7	NS				
	LP	96	87	LP				
	LS	9	7	LS				
13	RS	39	19	RS	23	42	65	195
	SS	726	649	SS				
	GE	12.9	12.4	GE	12.0	13.5	12.9	9.1
	NP	76	46	NP	8	63	29	26
	NS	6	5	NS				
	LP	76	36	LP				
	LS	6	4	LS				
14	RS	31	21	RS	31	30	60	161
	SS	627	701	SS				
	GE	11.6	12.9	GE	13.8	10.0	12.3	7.0
	NP	38	68	NP	28	20	20	11
	NS	4	6	NS				
	LP	38	62	LP				
	LS	4	6	LS				
15	RS	42	20	RS	37	46	83	207
	SS	779	674	SS				
	GE	12.9	12.9	GE	14.5	14.1	14.2	10.3
	NP	89	57	NP	48	73	58	34
	NS	7	5	NS				
	LP	91	47	LP				
	LS	8	5	LS				

		Canadian Achievement			Nelson - Denny			
		MATH C & A	REF. SKILLS		VOC.	COMP.	TOTAL V & C	READING RATE
16	RS	33	13	RS	25	26	59	241
	SS	650	530	SS				
	GE	12.5	6.4	GE	12.7	8.7	10.7	13.0
	NP	47	10	NP	13	11	9	58
	NS	5	2	NS				
	LP	49	5	LP				
	LS	5	2	LS				
17	RS	41	20	RS	23	42	65	278
	SS	758	674	SS				
	GE	12.9	12.9	GE	12.0	13.5	12.9	15.3
	NP	85	57	NP	8	63	29	78
	NS	7	5	NS				
	LP	87	47	LP				
	LS	7	5	LS				
18	RS	43	21	RS	39	56	95	301
	SS	804	701	SS				
	GE	12.9	12.9	GE	14.7	15	15	15.3
	NP	93	68	NP	50	94	76	87
	NS	8	6	NS				
	LP	96	62	LP				
	LS	9	6	LS				
19	RS	40	23	RS	31	44	75	230
	SS	741	764	SS				
	GE	12.9	12.9	GE	13.8	13.8	13.6	12.3
	NP	80	87	NP	28	69	47	52
	NS	7	7	NS				
	LP	82	87	LP				
	LS	7	7	LS				
Class Means	CL	19	19	CL				
	SS	744	705	SS	35	42	77	266
	GE	12.9	12.9	GE	14.3	13.5	13.8	14.6
	NP	81	69	NP	40	63	50	72
	NS	7	6	NS				
	LP	84	70	LP				
	LS	7	6	LS				
	GR	292	290	GR				

VII CONTINUED

B. Task Force Information

A PROPOSAL FOR AN ACADEMIC SKILL CENTER OR A "SUCCESS CENTER":

It is important to highlight at the outset that an Academic Skill Development Center is not a panacea for the learning deficit ills of the "new" student. Faculty development, placement/diagnostic testing, developmental programs, support services, adequate space, a comprehensive curriculum and, above all, a collegewide commitment to a "developmental milieu" are essential conditions for success.

Six stages have been identified in the developmental strategy: assessment, placement, identification of needs, diagnosis, prescription and evaluation.

Assessment would be done through a battery of tests which would be administered to all incoming students as part of an orientation process. Most of the tests would be computer scored. The results would then be carefully analyzed and local norms developed. A sample test battery could include:

Diagnostic Reading Tests
College English Placement Test
Essay Topics
Study Habits
Survey of Study Habits and Attitudes
Self Concept Scale
General Math Skills

Scores would be interpreted to the students and would provide useful background information for course selection/placement and self help. At this stage students with serious learning problems would be identified and referred to the Success Center personnel. Once identified, the diagnosis of the skill deficit should take place through testing instruments and interviews. A strategy for overcoming the weak area would be developed in consultation with the Success Center staff. This prescription could include peer tutoring, self-paced learning, a developmental program (class), counselling, tutoring by a learning specialist or any combination of the aforementioned.

Evaluation through frequent testing is critical in this process. Accurate recordkeeping is extremely important in monitoring the student progress and the extent to which program goals are met.

The Academic Skills Development Center then, is the nuclear reactor which energizes, sustains and buttresses the developmental efforts of instructors and support service staff throughout the college.

ACADEMIC SKILLS DEVELOPMENT CENTER

Through the establishment of an Academic Skills Development Center it is the intention of Grande Prairie Regional College to address the marked deficit in student basic skills of literacy and numeracy in addition to the constellation of such related issues as study skills, test anxiety, report and term paper writing, English as a second language, etc. It is proposed that a comprehensive program of diagnosis and identification of learning skill deficiencies be designed with follow-up group and individual remediation strategies. The Skills Center will provide support to students who are reterred by faculty, or who "drop-in" for assistance on a particular learning program. Faculty would be encouraged to consult with the Learning Skills Specialist about various learning problems they encounter in the classroom. The center would be staffed by trained professionals and peer tutors (para-professionals locally trained) and should be equipped with the necessary resource support (hardware and software) i.e. computer assisted learning.

D E Hall

Don E. Hall
Director of Student Services

LEARNING ASSISTANCE PROGRAMS - A SKILLS CENTRE

"Learning Assistance programs can avoid much of the past and current controversy if they are conceived and developed in accordance with the following principles." (p. 21, New Directions for College Learning Assistance, 11, 1980)

1. Broadly Conceived
2. Based on Sound Needs Assessment
3. Support of Boards, Administration and Faculty
4. Established in the Context of a General Accountability Model of the College

It's critical, therefore, that there be a college commitment to Learning Assistance Programs, a component of which is the Skills Centre.

RECOMMENDATIONS

Establishment of a representative Task Force* whose mandate it would be to:

(A) Determine the learning needs of the G.P.R.C. student, based upon needs assessment;

(B) Ensure the awareness of the general community to student skill deficits here based upon local data, e.g. prototype intake assessment, random assessment of returning students;

(C) To design strategies through research, conferences, visits, etc. appropriate to our unique population and resources;

(D) To develop an overall proposal by mid-January 1985, in time for consideration in the 85/86 budget for implimentation September 1985.

* Academic Development, Human Development, Career Programs, U.T., Tech./Voc., Student Services, Student Association, Community?

The task force should be the child of what group?

Cost Estimates

1.	Establishment of a Chairman Personal Development (Counseiling, Health Services, Student Activities)	$2,500
2.	Task Force funds - visits, research (ERIC) conferences, consultants	$3,000
3.	Needs Assessment - task, scoring, statistical analysis	$3,000
		$8,500

(Lets round it off to: $10,000)

PROPOSAL
FOR ASSESSMENT OF NEEDS OF G.P.R.C.
LEARNING ASSISTANT PROGRAMS/ACADEMIC SKILLS CENTRE

Assessment of Needs Obtained Through:

- survey of literature
- observation of programs in operation
- discussion with professionals involved in academic skills centres and developmental programs
- assessment of an by students of G.P.R.C.
- discussion with and input by instructors, counsellors, and administration at G.P.R.C.

Questions To Be Answered:

- What strategies are required to address the skill deficits of G.P.R.C. students?
- What is the role perception of an academic skills centre by students, staff and administration?
- Who is to be served? Who would be the primary target group? Would there be secondary target groups?
- What should be presented or provided in an academic skills centre?
- What would be the general cost factors?
- What would be needed in terms of physical facilities, personnel, supplies and equipment?

The needs assessment would be conducted over a six-month period. At the end of the study a detailed report would be presented.

COSTS: (Based on an eight-month period)

Wages - salary based on grid placement - benefits (15%)	$32,506.00
Miscellaneous	
(a) Travel - Airfare -West Coast -Eastern Canada -Accommodations - By Car in Alberta - Conference Fees (b) Support Staff - secretarial help - library staff time	$ 6,000.00

(c) Supplies and Equipment)
)
(d) Office Requirements - space)
- telephone)

TOTAL $38,506.00

C. Post Secondary Institutions

ALBERTA VOCATIONAL COLLEGE

CALGARY, ALBERTA

EXCERPTS TAKEN FROM THE 1983-84 ANNUAL REPORT

Used with permission from Joan Mulder

LEARNING ASSISTANCE CENTRE MANDATE

To facilitate individual student cognitive and social development for increased academic success by assisting in the development of learning skills and systematic approaches to the acquiring of knowledge and abilities.

GOALS (priorized)

GOAL I Learning assistance, in support of AVC instructional programs, is provided to all AVC registered students on a voluntary basis through personal and group assistance and in-class workshops.

Students are classified as (not necessarily priorized):

A. Drop-in Students: those requiring help with class assignments who "drop-in" for immediate assistance anytime between 8:00 am and 5:00 pm.

Numbers increased by about 30% from the previous year probably because of increased staffing. Approximately 80 students per day "dropped-in" for some type of assistance. See Table 1 for numbers per month. Detailed statistics (see Tables 2 and 3) were kept for the English area indicating the origins of these students (26% from English 13; 21% from English 23) and the type of assistance given (writing, 21%; grammar, 19%).

For the math/science area, most students came for help in Math 13 (22%) and in Math 20 (13%). See Table 4 for detailed listing.

B. Program Students: those who register for ongoing programs in such areas as spelling, grammar, speed reading (8 tape/booklet courses available).

Table 5 indicates the number of students registered per month ranging from 76 students in September to 16 in June, with an average of 25 students per month. (An increase from last year of 16 students per month average.)

Table 6 indicates the programs used (the 12 hour Effective Reading Course and the Controlled Reader Course were most popular with 256 students enrolled during the year).

C. SHORT REFERRAL STUDENTS: those who are referred by an instructor or counsellor for help with specific areas of concern by use of a special "Referral Form".

Sixty-four students received help in this way; most came from Business Education and Nursing Assistance.

D. WORKSHOP STUDENTS: those attending workshops on learning skills (such as notetaking, time management, exam taking).

During the first weeks of both semesters, LAC staff offered about 20 different mini workshops (30 min. each) in learning skills, or grammar and math related areas. Five or six students attended each workshop.

In December and January, the LAC offered the February-entrance students an opportunity to get a head-start on "learning how to learn". Fifty-one students enrolled in the 2-hour workshops with most electing to continue with the 10-hour tape-booklet Academic Skills program.

E. PEER TUTORING STUDENTS: those involved in helping each other learn.

A pilot project began in March, 1984, with 43 students participating as tutors or tutees over a 3-month period. Orientation sessions were held for tutors, and weekly (or more frequently) contact was made in order to monitor progress. See attached report (appendix 1) prepared by Cathy Shaw.

GOAL II Instructional programs in selected areas of math/science, language arts and general learning skills are provided to a limited number of students categorized as follows:

A. PRE-ENTRY STUDENTS: those who are awaiting AVC entry and who have been referred by a counsellor.

These students were enrolled in English and Math programs which generally involved material at the grade 7 to 12 level.

Table 7 indicates the number of students registered in English and Math programs each month.

122 students were referred by counsellors throughout the year with an average of 25 students enrolled per month.

B. INSTRUCTOR REFERRED STUDENTS (IRS): those who take a class period in the LAC and have been referred by an instructor supervisor or assistant instructor supervisor.

This was a new group of students for the LAC and procedures have now been formalized. Thirty-three students were registered as either "self-study" or "program" students. See Table 8 for details.

C. OTHER STUDENTS: Self-referred AVC registered students: those in 3 Academic Upgrading classes but requiring an ongoing remedial program. Each month an average of 3 such students were registered in the English area.

D. SPECIAL CASE STUDENTS (outside or AVC registered): those who fit into none of the above categories but are eligible to attend the LAC. Approximately 3 students per month attended and in this categiry attended the LAC.

GOAL III LAC staff provided instructor support for AVC faculty and acquired learning materials for the LRC. The "support" involved assisting instructors in selecting and/or using self-instructional programs for their students; and also making instructors aware of new programs or materials. Liaison with instructors involving student difficulties and development was conducted on an informal and formal basis. LAC staff also participated in curriculum planning and testing.

The materials acquired for the LRC are listed in the LRC report.

STAFFING

1. Joan Mulder - Co-ordinator to June 1983
2. Don Nelson - Math Instructor
3. Maureen Smith - English/Math Instructor
4. Iris McBean - Math/English Instructor
5. Cathy Shaw - English Educational Assistant
6. Diny Woyiwada - Math Educational Assistant
7. Heather Murray - STEP employee

See Appendix 2 for a listing of credentials and period of employment for staff.

INFORMATION ABOUT STUDENTS USING THE LEARNING SKILLS CENTRE

I-A Drop-in Students

Policy - AVC registered students can obtain individual or small group assistance (with learning skills, math/science or English) by requesting help from an LAC instructor or educational assistant.

Procedures

1. Students voluntarily arrive and request help.
2. Priority is arranged by the LAC staff. The Centre operates on a "first-come-first-served" basis (generally students cannot make appointments).

I-B Program Students

Policy - AVC registered students cal elect to work on remedial or developmental programs in such topics as spelling, grammar, reading, study skills (see attached list for brief explanation of format and program content).

Procedures

1. Student requests, or instructor suggests, a specific program. LAC staff member explains such things as program content, and applicabliity, time frame and format.
2. Student "signs-up" for program on attached attendance sheet and is required to note each day attended.
3. Student is also required to enter test scores on progress sheet (these are kept in the LAC)
4. LAC staff monitors attendance and progress sheets. Student is called in if either is not satisfactory.
5. At month end, LAC staff completes "progress" on attendance sheet and sends copy to AVC departments for posting on staff bulletin board.

I-C Short Referral Students

Policy - AVC registered students can be referred for assistance with specific areas of difficulty.

Procedure

1. Classroom workshops will be arranged by the LAC Coordinator, the classroom instructor and the LAC staff member involved.

II-A Pre-Entry Students

Policy

Pre-entry students will be admitted for study in the LAC in the areas of math/science and English (including pre RNA, pre Business Education).

Procedure

1. Students are referred through an AVC Counsellor who completes the attached referral sheet which is forwarded to the LAC Coordinator. The counsellor is expected to inform the student about the basic operation of the LAC (see attached information sheet).
2. The LAC Coordinator and "team" have the responsibility of accepting or rejecting the referred student.
3. Referral and acceptance of students is considered against the following criteria:
    a. The student's ability to work with some degree of independence
    b. The student's maturity level and highest grade completed
    c. TABE results and discrepancy between math and reading scores (we are unable to accept a student who is functioning below grade 7 on the TABE)
    d. Refresher and review work as opposed to initial teaching
    e. An AVC related educational goal in one of the instructional departments
    f. The availability of instructional material in the required skill area (we can prep for entry into

Eng. 13, Eng. 23, Math 13/15, Math 20; and direct Bus. Eng or N.A. entry).

4. If the student is accepted, the LAC instructor will contact the student to arrange for an appointment (the counsellor is requested to refrain from bringing the student directly to the LAC instructor, except in special cases).

5. At the initial session, topics of study will be outlined; the responsibilities of self-instruction discussed; study days scheduled; and periodic lessons covering various topics related to study, study skills, and subject content assigned.

6. Monthly attendance and progress reports will be prepared by the LAC staff member and discussed with a delegate counsellor (see attached sheet).

7. Reports of recommendations or assessment will be prepared by LAC instructor and forwarded to delegated counsellor (see attached).

LEARNING ASSISTANCE CENTRE

INFORMATION FOR PRE-ENTRY STUDENTS

Your studies in the LAC (Learning Assistance Centre) will be mainly through self-instruction.

The procedures and routine of the LAC will be as follows:

1. After an interview with an LAC instructor and possibly some diagnostic testing, you will be assigned certain topics for study relating to your individual needs.
2. Materials will be provided for each unit of work AS YOU NEED THEM.
3. You work in the LAC and may do extra work at home if you choose.
4. Instructors are available in the LAC to assist students with areas of difficulty.
5. Your instructor will review your work with you to check your overall progress at appropriate times.
6. Upon completion of a unit of work, a test will usually be given and new work will be assigned.
7. You are expected to attend according to your schedule. Please phone if you intend to be absent. Continued absence will result in your termination from the program.
8. Your first four weeks will be a trial period for you and for use. At the end of this period we will discuss mutual concerns.

Procedures and attitudes developed through self-instructional learning will prove to be most helpful for further studies.

II-B Instructor Referred Students (I.R.S.)

Policy

AVC registered students will be permitted to attend the LAC in lieu of class attendance.

Procedure

1. Only an AVC registered student who has been recommended by an instructor supervisor or assistant instructor supervisor is eligible to attend (see Student Selection below).

2. The designated LAC Math or English instructor has the responsibility of accepting or rejecting the student.

3. Student Selection: requests for admittance to the LAC will be considered against the following criteria:

    A. The student's ability to work with some degree of independence

    B. The student's maturity level

    C. Refresher and review work as opposed to initial teaching

    D. The availability of instructional material in the required skill area (we can prep for entry into Eng. 13, Eng. 23, Math 13/15, Math 20; and direct Bus. Eng or N.A. entry in special cases.)

    E. Students will be designated as:

        1. Self-Study Students: regular attendance required - LAC staff to assist when necessary with classroom assignments. (No loading restrictions.)

        2. I.R. Program Students: regular attendance required - LAC instructors to assign individual instructional programs and be responsible for student progress and recommendations. LAC loading is limited to about 10 students working in Math/Science and 10 in English at any given time.

4. The Instructor Supervisor or the Assistant Instructor Supervisor forwards a referral to the designated LAC instructor with all the appropriate information provided (see attached referral). The LAC instructor either accepts or rejects the students and, if required, assigns program.

5. Attendance: for both Self-Study and I.R. Program students, attendance will be taken daily. Weekly computer sheets will be completed by designated LAC instructor each Friday.

   A. Self-Study Students report daily to the LAC during designated class time. These students review and study their own material or classroom work with minimal assistance.

   B. I.R. Program Students, upon receiving outline of work, will report to the LAC during designated class time. They will complete assigned daily tasks.

6. Students must perform in an acceptable manner re: attendance, behaviour and progress. Students are given an "Information Sheet" (see attached). If there are any difficulties, details will be forwarded to the Instructor Supervisor or Assistant Instructor Supervisor.

7. Upon completion of study or term, the student's progress and recommendations are completed by the designated instructor (see bottom section of referral sheet).

TABLE 1: AVERAGE NUMBER OF DROP-IN STUDENTS PER DAY

FOR BOTH MATH/SCIENCE AND ENGLISH

Month	Math/Science	English
September	40	50
October	40	35
November	41	41
December	47	36
January	45	28
February	51	43
March	49	40
April	45	34
May	43	40
June	32	30

* Students requested to sign a "drop-in sheet" indicating type of assistance received, and course or program most closely related to the help obtained.

TABLE 2: ENGLISH AREA-ORIGINS * OF DROP-IN STUDENTS

Program	Number	Percent
Level 2	114	1.80
Level 3	431	7.04
English 13	1602	26.18
English 23	1306	21.34
English 30	638	10.43
English 33	186	3.04
ESL	152	2.48
RNA	100	1.63
Bus. Ed.	487	7.96
Social	68	1.11
Other Programs	59	.97
Not Identified	976	15.95
	6119 (an increase of 28% from 1982 - 1983)	

* The courses or programs most closely related to the help received.

TABLE 3: ENGLISH AREA-TYPES OF HELP GIVEN TO AVC DROP-IN STUDENTS

Type	Number	Percent
Study Skills	281	3.78
Grammar	1428	19.17
Writing	1556	20.89
* ESL	119	1.60
Reading	906	12.16
Spelling	550	7.38
Vocabulary	372	4.99
Punctuation	493	6.62
** Other	684	9.18
Not Identified	1061	14.24
	7450 (an increase of 33% from 1982 - 1983)	

* ESL: numbers reflect only in-depth assistance, not the numerous times we have assisted these students in finding suitable learning materials.

** Other: includes counselling, helping students operate machines or locate material.

TABLE 4: MATH/SCIENCE AREA - ORIGINS OF DROP-IN STUDENTS

Level 3	18.5%
Math 15	4.9%
Math 25	0.9%
Rapid Cal	0.9%
Math 13	21.6%
Math 20	13.1%
Math 30	11.6%
Math 31	2.9%
Science II	1.8%
Physics 10/20	7.4%
Physics 30	0.3%
Chem 10/20	2.3%
Chem 30	0.2%
Misc. & Computers	15.7%

TABLE 5: NUMBER OF STUDENTS PER MONTH ON ENGLISH PROGRAMS

Month	Students
September	76
October	51
November	59
December	36
January	17
February	47
March	40
April	41
May	35
June	16
AVERAGE PER MONTH	42

TABLE 6: ENGLISH PROGRAMS USED BY STUDENTS

Program	Number	Percent
Grammar	19	4.4
Mechanics	4	0.92
Medical Terminology	2	0.46
Phonics	3	0.70
Reading	256	59.40
Spelling	81	18.79
Study Skills	57	13.23
Vocabulary	9	2.09
	431	

BE AN OWL
Older Wiser Learner

Do you give a hoot about your studies?

If you do, the Learning Assistance Centre (LAC) is the place for you.

Drop-in help

You can receive individual assistance in English, math, science, and study skills on a drop-in basis. You can also work on a self-help program in spelling, grammar, reading, vocabulary, metrics and others.

Workshops

We offer scheduled workshops such as notetaking, time management, how to study math, exam writing, etc.
Students may also request a group workshop on any topic that is causing them difficulty. See the back of this sheet for the schedule of our first set of "OWL" workshops for this semester.

Peer Tutoring

The centre organizes students to tutor fellow students wanting assistance with course work.
If you are interested in becoming a peer tutor, or would like to receive peer tutoring help, see Cathy Shaw in the LAC.

HOURS: Monday - Friday, 8:00 a.m. - 5:00 p.m.
LOCATION: 4th floor, back of the Library

BEST COPY AVA

DAWSON COLLEGE

MONTREAL, QUEBEC

SELBY

350 Selby Street
Westmount, P.Q.
H3Z 1W7
Room: 2060/65/75

Mary Boulle
Helen Wehden
Diana Dupelycz

Tel: 931-8731 Local: 259 or 387

LAFONTAINE

1001 Sherbrooke St.
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Rozanne Goldman

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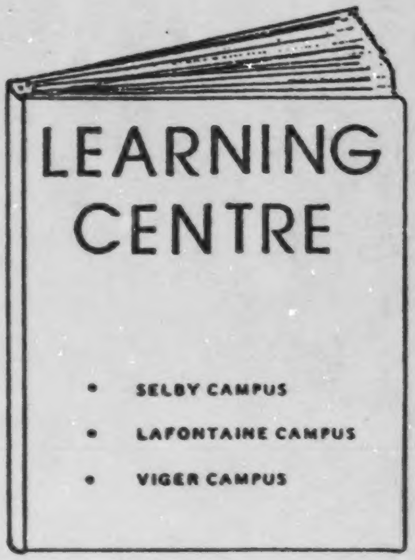
VIGER

535 Viger Street
Montreal, P.Q.
H2L 2P3
Room: M3130

Phil Heilig

Tel: 849-2351 Local: 263

Inquiries: Learning Centre
Dawson College
350 Selby Street
Westmount, Québec
H3Z 1W7



LEARNING CENTRE

- SELBY CAMPUS
- LAFONTAINE CAMPUS
- VIGER CAMPUS

A Student and Faculty Service

of

dawson college

Montreal, Quebec

Student Services Department

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CHECK YOURSELF OUT...

"... don't understand what I read."

"How do you take notes anyway?"

"Writing is my problem."

"I want to improve and increase my vocabulary."

"... but I never have enough time to do all my work!"

"... but I did study!"

"... have trouble concentrating and remembering."

"My mind goes blank during exams."

WHAT DO I DO?

Drop by the Centre or call to make an appointment.

Discuss your needs with a staff member.

Schedule your Centre time in accordance with your timetable.

- Work with a staff member
- Work with a student tutor
- Work in a small group
- Work independently with Centre materials

YOU CAN GET HELP...

- Reading and Understanding Textbooks
- Taking Notes from Textbooks/Lectures
- Writing Essays and Term Papers
- Developing Vocabulary
- Organizing Study Time
- Studying More Effectively
- Improving Memory and Concentration
- Writing Tests

SERVICES OFFERED

Testing
Individual & Small Group Tutoring
Short-term Workshops
Study Skills Counselling
Second-Language Help
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FANSHAWE COLLEGE

LONDON, ONTARIO

ANNUAL REPORT
ON THE OPERATION OF THE
MATHEMATICS LEARNING CENTER AT
FANSHAWE COLLEGE

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FANSHAWE COLLEGE
LONDON, ONTARIO
JANUARY 1983

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GENERAL INFORMATION AND STATISTICS

1. Operating Hours

During 1982 the Mathematics Learning Centre continued operating on a 12 month basis, open daily from 8:30 a.m. to 5:00 p.m. Monday through Friday and from 7:00 p.m. to 10:00 p.m. Monday, Tuesday, Wednesday and Thursday evenings. Monday and Wednesday evenings were reserved for Community Services students registered in Qualifying Mathematics. During the months of April to August, the Centre was also open from 7:00 p.m. to 10:00 p.m. Mondays for the general public.

2. Staffing

During 1982 the Centre's staff consisted of one coordinator, three faculty, two technologists and one technician. This full-time complement was assisted on a part-time basis by six part-time faculty, two technicians and one clerk.

3. General Profile of Mathematics Learning Centre Activities

While the Centre is currently part of the Academic Organizational unit, its activities are more diverse than the post-secondary area. Approximately 30% of the Centre's resources are devoted to remedial and/or upgrading for post-secondary students. However, the majority of this function has been shifted to the preadmission stage and technically the students are not post-secondary students since they have not registered in their program while the Centre is working with them.

The remaining 70% of the Centre's resources are allocated amongst:

(a) Credit courses for post-secondary students who are repeating courses or who cannot fit into regularly scheduled classes because of timetable conflicts.

(b) Credit courses for Continuing Education students such as those on shift work who cannot attend night classes regularly and those who cannot take a course because it is cancelled due to low enrolment.

(c) Apprentice mathematics courses for civil, mechanical and plumbing trades.

(d) Mathematics courses for the Industrial Craftpersons program.

(e) Credit courses for General Arts and Science students.

(f) Mathematics anxiety counselling and the provision of developmental programs ranging from Grade 1 to University level mathematics. The programs are provided on either a homestudy or combined homestudy classroom basis to accommodate the individual needs of persons from the community.

(g) Support of other College operations or programs such as:

1. Mathematics Learning Centre operations in St. Thomas and Woodstock.
2. Into programs.
3. MRC, Secretarial Arts, Hotel & Restaurant and Junior Programmers.

(h) Providing Mathematics Counselling service to members of the community. Requests for this service have increased dramatically since 1981.

5. Clientele

Persons who took advantage of the previous mentioned services were from the following categories:

(a) Full-time and part-time College students.

(b) Those who could not attend existing day or evening courses due to shift work, commercial travelling, periodic hospitalization (workmen's compensation), etc.

(c) Those who had been out of school for a number of years and required a period of readjustment to refresh their skills.

(d) Those who wanted to learn or review only particular topics and did not wish to commit themselves to a full course.

(e) Those involved in correspondence courses and needing assistance and advice.

(f) University students who encountered difficulties in their mathematics courses at U.W.O.

During 1982 the Centre experienced an increase in the number of students sponsored by such agencies as Indian Affairs, Workmen's Compensation, Vocational Rehabilitation and others.

In addition, the Centre receives many ;unique inquiries for assistance in answering mathematics related questions such as odds on lotteries, interpreting statistical data, accounting problems, physics problems,etc.

APPENDIX II DEVELOPMENT AND/OR TESTING FUNCTIONS

To smoothly facilitate an increasing operation, the Centre's staff has been busy in the development of various elements making up an effective administrative organization. In addition, the Centre has been engaged in or has proposed the examination of a number of projects in the past few years.

1. Development of a Comprehensive Testing and Counselling Service

The tests and the logistics to effectively and efficiently administer the mathematics counselling service for applicants. Special external test packages were designed for applicants living at a great distance from the College. Arrangements were made in 1979 and 1980 for students to write tests at the following locations: Kenora, Thunder Bay, Sault Ste. Marie, Sudbury, Timmins, Ottawa, Orillia and Toronto.

In 1980, Humber College, Toronto, and in 1981, Connestoga College, Kitchener, have requested permission to adopt these tests and our system to counsel and provide remedial services in mathematics. The external tests are "criterion-referenced

and not "standard normal". They were designed to have the following characteristics:

(a) Easy to administer.

(b) Capable of identifying areas of potential weakness in prerequisite skills.

(c) Capable of predicting an applicant's probability of success in first semester college mathematics courses.

2. Development of Learning Materials

Since its inception, the Mathematics Learning Centre has designed and implemented new learning systems and developed testing facilities. Both the learning systems and the testing share the common objective of removing obstacles to learning such as improper course placement and promotion. In all but a few instances, the learning materials used to support these activities have been those which are commercially available.

During 1979, the Centre's staff began to seriously investigate the development of learning materials specifically suited to the College's needs and allocated some time towards the development of sample materials to ascertain the extent of the task. The results of this activity have led to the conclusion that the expertise to accomplish the task exists within the Centre and the overall task is both feasible and desirable.

3. Curriculum Development

3.1 Correspondence Courses

In conjunction with the development of learning materials mentioned above in 2, the Centre planned in 1980/81 to develop quality correspondence courses in mathematics for Community Services. The resulting correspondence courses utilize the learning materials developed by the Centre and thus, provide a revenue source to offset development costs.

3.2 Computer Self Study Course

In 1981, the Centre also developed a self study program designed to introduce students to microcomputers and programming in Basic. This self study program was further developed in 1982.

3.3 Homestudy College Credit Courses

The Mathematics Learning Centre has provided homestudy upgrading programs for Continuing Education students since 1974. During 1975 and 1976 materials were developed due largely to the financial support provided by Continuing Education in helping to obtain typing and clerical assistance.

The availability of these homestudy credit courses during the years 1978 to 1981 has provided additional service to those people who are unable to take advantage of traditional day and/or evening classroom services offered by the College. In addition, the availability of this material has enabled Continuing Education to provide those students whose courses are cancelled due to an insufficient number of registrations with the opportunity to still obtain the mathematics credit they require.

3.4 The Combination System

This system was developed and implemented during 1976. Since then, the existing methods and materials were refined and the system was extended to other courses. Please refer to Appendix V - Two Basic Learning Systems, for further details.

Testing, Its Effect on Registrations and Enrollments

Did the requirement for mandatory preadmission testing result in programs receiving fewer applications and/or suffering a decline in enrollment?

To answer this, the application history for the Fanshawe programs which have been most heavily involved with preadmission testing from 1975 through 1980 was analysed. The analysis indicated no decline in the number of applications received and, in fact, the business program, (where preadmission testing has been mandatory since 1978), had the largest increase.

To analyze the effect of preadmission testing on actual enrollments was a more complex task since we hypothized that if preadmission testing was a negative factor, this would have to show up as a shift in Fanshawe's traditional demographic enrollment patterns.

To test this hypothesis, Ontario Ministry of Colleges and Universities demographic enrollment data was obtained for the period prior to, during and subsequent to the introduction of preadmission testing. The subsequent analysis involved the students enroled in Fanshawe's business and technical programs from 19 countries surrounding Fanshawe compared against enrollments in similar programs from the same counties in the 5 colleges closest to Fanshawe. The remaining 16 Ontario colleges were treated as a unit.

In every case examined, the results were the same - there had been no significant enrollment shifts before, during and after the introduction of preadmission testing.

RECOMMENDATIONS

If one is interested in decreasing the failure rate in first semester mathematics courses by providing unprepared students with a valid opportunity to learn, one should consider adopting the following procedures when admitting students to college programs requiring mathematics.

1. All applicants should have their actual mathematics knowledge level assessed by means of an appropriate preadmission test.
2. Applicants who are identified as having gaps in their prerequisite mathematics skills should be provided the opportunity to upgrade these deficiencies prior to commencing their college program.
3. Applicants who have a significant lack of the most fundamental mathematics skills most often also lack basic study skills, reading skills, etc. For this group, the so-called "high risk student", the college should provide a qualifying program for one or two semesters. In order to provide a valid opportunity to learn subsequently, the qualifying pro-

gram should address itself to all the fundamental skills a student requires in order to learn in a particular program.

What we recommend, in effect, has been stated most concisely by the educational psychologist, Dr. Ausabel, when he wrote, "The most important single factor influencing learning is what the learner already knows. Ascertain this and teach accordingly.

CONCLUSIONS

In concluding, we should like to comment on the concept of the student's "right to fail". In our judgement, the "right to fail" must logically be preceded by the potential to pass. A student who lacks the potential to pass through lack of prerequisite skills cannot possibly exercise a "right to fail" since exercising a right necessarily implies that choice exists.

A college cannot claim to be providing an educational opportunity unless it first determines whether its applicants have the prerequisite skills necessary to be successful and counsel them accordingly. To do otherwise merely provides an enrollment opportunity.

A Statistical Analysis of the Results in the Reading Center, Fanshawe College

Using Minitab II Program

Fanshawe College Computer Center

Fall 1981

submitted to

Joseph Cleary

Languages and Communication Division

by

Sydney J. Henderson

Interim Co-ordinator

Reading & Study Skills Center

Fanshawe College

"Used with permission of Sydney J. Henderson"

Introduction

This report will outline the results of improvement shown by pre and post testing of students enrolled in the Fanshawe College Reading Laboratory during the Fall semester of 1981. The Iowa Silent Reading Tests, both A.M. and C.M. were used to obtain the results.

From the positive attitude and the high motivation shown by most of our students, the instructors in the course felt the improvement must be substantial, but we needed facts and figures to prove the results. Widespread statistics (The Journal of Reading, 1981) indicate two grades per semester for remedial students to be an achievement particularly if the starting point is below the grade nine level. Were Fanshawe students doing as well as the North American average?

It was also felt that those students having only two classroom periods per week or a total of 22.5 hours classroom time during a semester were at a disadvantage and that their results were consequently lower than those of the three hour per week or 35 hours classroom time per semester. In turn, it was felt both of these groups were substantially lower than the three/four hour per week averaging 41.5 hours of classroom time. The latter timetable was of particular interest to us since it was the first time we had ever had a class for this length of time. Consequently a text book, Reading Faster and Understanding More Book II by Wanda Miller et al. was used, in addition to the individualized program prepared by the instructor in the course. These classes were smaller than average as well. There were thirty-five enrolled in the course initially, and four dropped out leaving fifteen in one class and sixteen enrolled in the other instead of the usual twenty two. Did the extra time for individual students make any difference?

We also wished to know if the attrition rate from the course was higher for students starting with very low scores and having a short time, (22.5 hrs.) allotted to upgrading, or if any difference could be detected.

The Assessment Procedure

All of the students registering at Fanshawe College for the fall semester were required to write the Davis Reading Test. Using this as a guide it was suggested those students scoring below Stanine 3 (approximately grade 9) take an upgrading course in remedial reading.

The Davis test is diagnostic only in so far as it suggests difficulties in speed and/or comprehension. It does not pinpoint difficulties with vocabulary, skimming, scanning, spelling, sentence meaning, many of the areas of expertise needed to successfully complete the programs at Fanshawe.

For this reason, a student must be further assessed before one can begin remedial work. A variety of means is used to do this. The Iowa Silent Reading Test A.M. is used to give us a nine item breakdown of the difficulties a student may have. In addition a written autobiographical sketch of his reading habits is required. Both of these are given and marked by the classroom instructor involved. Further assessment is done on a continuous basis through daily assignments and exercises based on their individual difficulties. A final post test, The Iowa Silent Reading Test C.M. is given upon completion of the course. From the score achieved we can determine the grade level and the percentile of improvement. A student at Fanshawe who writes the Iowa Test should achieve a standard score of 170. This equates to grade 11.8 (8 months in grade 11), percentile 26. It is the closest score to the grade twelve level of entrance suggested for the Fanshawe freshman student.

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Using the Fry index of readability the instructors of the Reading Center, have over the past several years, done extensive testing of textbooks used in the college. These have generally varied in difficulty ranging from the grade eleven to second year university level. This was the rationale behind our choice of the 170 standard score level.

Summary

The following analysis is based on the two sets of scores obtained by pre and post testing. They were calculated using the Minitab Tab II program in the Fanshawe College Computer Center.

All twice weekly classes in the regular stream were dealt with as a set, as were the thrice weekly classes. Preadmission classes were not mixed with the regular stream for several reasons. Their time frame was different, their classes were smaller and as mentioned earlier, their course involved the use of a textbook as well as the individualized program suggested by the teacher.

Table I shows the attrition rate encountered in the three groups. Among the regular stream students, the two hour remedial students had a higher drop out rate than the three hour 8.3% as opposed to 4.23% or in actual figures 12 students as opposed to 5. The preadmission classes had the highest of all classes percentage wise. However, their numbers were so small by comparison that four out of thirty-five originally enrolled looks like a high percentage, 11.42% when in fact, the number is not an unrealistic figure.

	2hrs. per week regular stream 22.5 hrs. class time		3hrs. per week regular stream 35 hrs. per semester		3 & 4 hrs. per week preparatory average 41 hrs. class time	
		%		%		%
1. No. of students enrolled	144	——	118	——	33	——
2. No. of students completing the course	132	91.6	113	95.76	29	88.57
3. Attrition (Withdrawals, terminations)	12	8.3	5	4.23	4	11.42

TABLE I - STUDENTS ENROLLED IN THE READING CENTER SEPT. 1981

Conclusions

It would seem that a number of our "feelings" were definitely now backed by figures. It is obvious that success in remedial reading is directly related to the amount of time spent in the classroom. See Table VIII.

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TABLE VIII

HOURS	INCREASED GRADE LEVELS	INCREASED PERCENTAGE OVER INITIAL
22.5	2.3	———
35	3	30.4%
Average 47.5	4.4	91.3%

With an initial 22.5 hours of classroom time the student will improve 2.3 grades. After this, it takes another 12.5 hours per semester in the Reading Center to improve 0.7 grades or 30.4%. With an additional 12.5 hours the results show a further increase of 4.4 grades or 91.3% over the original. With students who are reading at low levels, the optimum improvement is directly related to the amount of time devoted to remedial work.

Fanshawe students are definitely doing better than the North American average and they go well beyond that average when given even an hour per week more than the bare minimum requirements.

There was no actual proof regarding classroom size other than that our preadmission classes with smaller numbers of students did improve more than the two regular stream groups.

With regard to attrition, it would appear that students entering college with lower than average scores (see Table II) and little time to upgrade are inclined to drop out. When initial scores are higher as in the three hour stream, and more time is devoted to upgrading, the attrition figures were only 4.23%, almost half.

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GEORGE WASHINGTON UNIVERSITY

WASHINGTON, D.C.

THE GEORGE WASHINGTON UNIVERSITY

READING CENTER
2201 G Street, N.W.
Suite 429
Washington, D.C., 20052
(202) 676-6286

Florence E. Hesser, Ed.D., Reading Center Director

A HISTORY OF SERVICES AND PROGRAMS OFFERED

MULTIDISCIPLINARY TESTING AND DIAGNOSTIC SERVICES
- Intelligence Assessment
- Preschool Readiness Assessment
- Reading Assessment for Children and Adults
- Gifted Recognition Assessment
- Conceptual, Developmental, and Vision Assessment
- Speech and Hearing Assessment

TUTORING SERVICES

CONCEPTUAL, DEVELOPMENTAL, AND VISION THERAPY

SATURDAY MORNING PROGRAM FOR CHILDREN

AFTER-SCHOOL PROGRAM FOR GIFTED CHILDREN

SPECIAL PROGRAMS FOR CHILDREN AND ADULTS
- Thinking Enrichment
- Math Made Practical

JUNIOR HIGH SCHOOL PROGRAM
- Study Skills
- Optional After-School Study Hall Course

SATURDAY CLASSES FOR HIGH SCHOOL STUDENTS
- High School Study Skills
- SAT Preparation
- Verbal SAT Preparation Mini-Session

ADULT PROGRAMS
- Language Enrichment Programs
  - Basic Reading Skills
  - English for Daily Living
  - Strategies for Better Reading
  - Reading for Language Appreciation
  - Classic Literature: Our Roots in Reading

  - Advanced Reading Techniques
  - Skills for Effective Writing I and II
  - Spelling for Horrendous Spellers
- College Preparatory Programs
  - Reading and Study Skills for International College Students
  - Intensive College Preparatory Program

- New Management-Level Offering
  - GW TV Streamlined Reading Course

PROGRAM FOR PARENT INVOLVEMENT

OPEN DISCUSSIONS ON LITERACY TOPICS

GRANT MACEWAN COLLEGE

EDMONTON, ALBERTA

LEARNING SKILLS CENTRE

JASPER PLACE

WINTER 1984

Used with Permission from Karl Homann

The Learning Skills Centre offers equipment and instructional materials designed to assist students in improving their reading, writing, mathematical, and study skills. Students may use the L.S.C. in a variety of ways: on a drop-in basis to deal with specific questions or problems; to complete assignments for upgrading courses; to wrok on skills improvement as a part of a regular individual study plan; or to improve specific skills on the recommendation of program instructors. Two Instructional Assistants share supervision of the centre, thus making it available to students on a full-time basis. The L.S.C. is open Monday through Friday, generally between 8:30 a.m. and 4:30 p.m.

The following information offers a breakdown of student use of the Learning Skills Centre in terms of numbers of student contacts and average time spent in the centre. The appendixes provide a more detailed analysis of the figures.

Total number of student contacts for Winter 1984: 1,761

Average time per student contact: 1 hr. 10.8 mins.

Total number of hours L.S.C. was open: 609

Average number of student contacts per hour: 2.9

Number of individual students: 454

Average number of contacts per individual: 3.9

LEARNING SKILLS CENTER

JASPER PLACE

COMPARISON OF DATA

	Winter 1982	Winter 1983	Winter 1984
Total Number of Student Contacts per Timester	1,749	1,670	1,761
Average Time per Student spent in L.S.C.	1 hr. 06 mins	1 hr. 13.4 mins	1 hr. 10.9 min
Total Number of Hours L.S.C. was open	610	592	609
Average Number of Student Contacts per hour L.S.C was open	2.9	2.8	2.9
Number of Individual Students	227	270	454
Average Number of Contacts per Individual	7.7	6.2	3.9

LEARNING SKILLS CENTRE

JASPER PLACE

FALL 1983

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Total number of student contacts for Winter 1983: 1,691

Average time per student contact: 1 hr. .09 mins.

Total number of hours L.S.C. was open: 530

Average number of student contacts per hour: 3.2

Number of individual students: 344

Average number of contacts per individual: 4.9

LEARNING SKILLS CENTRE

MILL WOODS

WINTER 1984

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The following information offers a breakdown of student use of the Learning Skills Centre in terms of numbers of student contacts and average time spent in the centre. The appendixes provide a more detailed analysis of the figures.

Total number of student contacts for Winter '84 Trimester:	999
Average time per student contact spent in L.S.C.:	1 hr.12.7 mins
Total number of hours L.S.C. was open:	495.5
Average number of student contacts per hour:	2.0
Number of individual students:	339
Average number of contacts per individual during Trimester:	3

LEARNING SKILLS CENTRE

MILL WOODS

FALL 1983

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The following information offers a breakdown of student use of the Learning Skills Centre in terms of numbers of student contacts and average time spent in the centre. The appendixes provide a more detailed analysis of the figures.

Total number of student contacts for Winter '83 Trimester: 1318
Average time per student contact spent in L.S.C.: 1 hr. 9.4 mins
Total number of hours L.S.C. was open: 483
Average number of student contacts per hour: 2.72
Number of individual students: 346
Average number of contacts per individual during Trimester: 3.8

HOLLAND COLLEGE

CHARLOTTETOWN, PRINCE EDWARD ISLAND

HOLLAND COLLEGE

Excerpts Taken From
An Approach To Performance Based Learning at Holland College

developed by Holland College, 1974
revised 1979, third edition 1983
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INTRODUCTION

Established in 1969, Holland College was given a clear mandate by the Province of Prince Edward Island to provide Islanders with alternate programs at the post secondary level. Its establishment was an integral part of the re-organization of educational services in the provinces. The College opened its doors in September 1969 with 102 students. The college serves 8,000 students annually through full-time, part-time, short courses, and high class activity. Its programs now serve the adult population of P.E.I., whether or not they have completed a high school program.

APPROACH TO INSTRUCTION

The performance-orientated approach to instruction used at Holland College is called STEP (Self-Training and Evaluation Process) and its objective is to help learners assume responsibility for their own development while acquiring the skills needed to enter wage-earning employment.

The introduction of STEP occurred only after many hours of planning and discussion. Because Holland College was a new institution, the faculty was able to develop its own philosophy of instruction. This was done through numerous staff meetings during which the role of Holland College and an approach to instruction were fully discussed. In addition, other institutions were visited and resource people from education and industry participated in discussions. Meanwhile, members of the Board of Governors encouraged the faculty to be innovative.

There was unanimous support among the staff for the following basic principles:

- Skills required in an occupational field shall be identified by persons in the field;
- Students are responsible for their own progress and instructors are accountable for student progress;
- Learning shall be stressed instead of teaching;
- The role of the instructor shall be to assess, diagnose, prescribe, tutor but not to be the sole conveyor of information;
- Programs shall be individualized (personalized) to the full extent that resources allow;

- Resource rooms, materials, and instructors are to be scheduled instead of students;
- Evaluation shall be as realistic and meaningful as possible, in keeping with evaluation in the work environment;
- Students shall be able to enter and exit from a program at any time.
- Credit shall be given for previously acquired skills;
- Ratings are based only on performance;
- Students shall evaluate their own performance prior to confirmation by an instructor;
- Students shall be able to continue their learning program in a systematic way even after leaving the College.

IDENTIFYING SKILLS TO BE PERFORMED

Perhaps the most significant step in organizing an instructional system is to have a clear description of the terminal behavior expected of students. This means, therefore, that an analysis of each career field is required.

An analysis is prepared during the three-day "brain-storming" session. The program input is obtained from a committee varying in numbers from 8 to 15 people who either work in or are responsible for supervising persons who work in that occupation. Committee members must be well versed in the field and their specialty, be willing to share ideas and participate in discussions, and be open to innovation. They are led in their task analysis by a coordinator who is an expert in the method of task analysis.

The first step in making an analysis is to identify the major areas of competence within a field. In Business Administration for example, there are nine areas of general competence such as "Manage and Develop Employees", "Operate Accounting System", and "Operate Sales and Promotions." Once the general areas of competence are established, the committee then identifies all skills contained in each area of competence.

For example, a few of the specific skills found in the area "Operate Accounting System:" are: "Record Basic Accounting Entries" and "Prepare Working Sheets".

After the skills are identified in each area of competence, the final stage of the analysis is to arrange the skills into a simple to complex sequence.

A 1-4 rating or evaluation scale is a major part of every chart. This scale is based on performance criteria and stresses quality, speed and degree of supervision required to perform a skill.

It is common for people to convert the ratings to letters and percentages, but to do so destroys their significance. If one were to rate the performance of skills by persons in any occupational field, one would find some tasks performed at a high level of competence, many at an acceptable level of quality and speed, and some which are not up to a level for which an employer is prepared to pay.

THE DEVELOPMENT OF PROGRAMS

The completed task analysis is given to the program instructor who must now begin the major task of program development. The instructor's first responsibility is to define each skill more precisely by identifying its components for the student. To this point, there skill elaborations do not specify criteria in terms of time, working conditions, or available tools, equipment, and materials. For example, the skill "TYPE FROM PROOFREAD COPY" which appears on the Secretarial program's task analysis chart has been elaborated by an instructor as follows:

Type from Proofread Copy

Upon completion of this skill, you should be able to:

- interpret proofreader's marks;
- type corrections as indicated;
- proofread final copy.

The next step for the program instructor involves the gathering and preparation of learning materials. In addition, human resources are identified, and equipment required for learning activities is specified.

In order to simplify the storage of learning materials for efficient access by students, each program has its own resource room. In it, vertical file boxes labelled to match each skill found on the program's chart are placed on shelves. Then into each file is placed material designed to help the learner acquire the skill. These materials may consist of prepared lecture notes, manufacturers' handbooks and catalogues, and articles taken from periodicals, as well as references to selected texts. This serves to bring together, as quickly as possible, readily available materials related directly to the skill. It is desirable to have a wide range of print material to suit learners' various reading levels.

Moreover, the need to select and prepare a wide variety of audio visual materials is emphasized. Thus, instructors are constantly improving resources by obtaining commercially prepared audio and video tapes, slides, filmstrips, etc. In addition, college-prepared audio visual material is being developed by faculty. It is critical to remember that materials are designed for student and not staff use. Students should be able to learn from the material without an instructor's assistance.

STUDENT LEARNING PROCESS

Students coming to Holland College are interviewed by the staff, and at that time are made aware of the Self-Training and Evaluation Process (STEP) program. During the interview, academic deficiencies may be identified and a remedial program established.

When students arrive at the College for their application interview, and later after registration, an orientation program is conducted. This consists of a slidetape presentation and informal discussion, sometimes continuing over several days, so that the approach to instruction is fully understood.

Each student is given a copy of his program's occupational analysis, in chart form, and in consultation with his/her instructor-advisor, begins to plan a career program. For example, if the career objective is general secretarial work, certain skills for employment as a secretary may be required while others may be optional. Learning to set an objective, to select appropriate skills to reach that objective, to determine what, if any, sequence is required, and to put this together into a plan of action is an important part of the learning process. Learning situations should be as realistic as possible.

Students may need encouragement to make the initial selection of learning tasks; however, a choice must be made even if the decision is changed at a later date. Much valuable time can be lost in deciding where to start. Therefore, a wide range of "real" projects should be available so that students can get started. Each project will likely require the learner to develop facility in a number of skills on the chart, and so result in a rating for several skills.

The students may go to someone outside the College for help; in fact, the College takes advantage of such activities when opportunities arise. After a student feel confident that he/she can perform the task, the student rates himself. Then the student and the instructor together review the task he has performed and the student's evaluation. The discussion which occurs is an extremely important part of the student's learning activity. When the student and instructor agree on a rating, it is entered on the student's working chart and also on the official chart which is kept by the instructor. As the days and weeks pass, the student develops a profile of his skills and progress.

In multi-instructor departments, with a large number of students involved, it is conceivable that students could attend the College without their learning problems being quickly identified. To prevent this from happening, each student is assigned to an "advisor" who is normally an instructor in the department.

As an advisor, one is responsible for maintaining regular contact with the student and keeping a "weather-eye" on his general progress. An interview between student and advisor occurs at regular intervals, at least once every three weeks. Besides acting as advisor to a specific number of students, each instructor throughout the College is responsible for ratings in his area of expertise.

A Distant Early Warning (DEW) system is useful in order to alert both instructor and students to potential problems. At regular intervals, an analysis of students' progress is made in the Student Service's Office. If danger signals appear, the advisor is alerted and asked for information; if no improvement is noted during the analysis, a DEW letter is sent directly to the student. Letters are sent by Student Services, but in consultation with the advisors. In effect, this tells the student that he is on probation and must meet specific goals within a deadline. Normally, students who have not shown any progress during a six-week period are in danger of not being able to meet the objective which they set for themselves when entering the course.

Instructors have a responsibility to ensure maximum opportunity for the student to meet the objective which he has set. If the possibility of meeting the student's objective is in doubt, he is advised at the earliest possible date so that appropriate steps can be taken. In some cases, a new objective decision may be to recommend temporary or permanent termination from the program.

Normally, a thorough review of each student's progress is undertaken two or three times during the year. During this review, a student meets jointly with all his instructors. Out of this interview will come recommendations for continuation in the program, referral to special remedial help, additional financial assistance, or referral to employment.

On completion of one's training program, the student received an official copy of his chart showing confirmed ratings. Students are encouraged to discuss their career profile with prospective employers, and furthermore, to continue to use the document as a career training tool during their working life.

MAJOR OBSERVATIONS

It is the mature students who have been able to adapt most easily to this approach to instruction. The critical element appears to be the realization by a student that progress only occurs when he does something. Students who have adapted to the system have progressed beyond the normal levels of competence, both personal and technical, in amazingly short periods of time.

Instructors find themselves in the hitherto unusual, not unique, position of making professional decisions about each individual student. Instructors stand exposed in a way not found in regular institutions and yet success of the system is determined to a

large degree by their willingness to assume this responsibility.

Some instructors find it difficult to confront a student about his personal or technical weaknesses and to demand standards of performance consistent with the student's career objectives. There is a tendency to delay the confrontation, thereby often frustrating instructor-student cooperation so necessary for student growth.

Many students come later and leave earlier in the day than is the case in traditional institutions. (Others, of course, put in much more time). The shorter work week results in slower progress. This, the College feels, is a matter for the student to resolve, unless it begins to interfere with progress towards his objective. In any case, an instructor-advisor should be able to account for the whereabouts of "his" students at any time during the established working day. A record of attendance is kept, since this may affect progress; however, attendance is not used when establishing ratings. Attendance records are also useful when planning for the effective use of facilities and staff. A student who enrolls in the College and does not attend may find himself terminated and the "training station" assigned to another person waiting to enroll.

It has been found that students take various lengths of time to adapt to a learning philosophy which gives the learner much freedom yet imposes an equal amount of responsibility. However, three factors have aided in reducing this problem. First, continual development of learning materials suitable for students has resulted in shortening the adjustment period. Also, orientation programs have been continually revised and improved in all departments. Moreover, the establishment of industrial advisory committees for each program has enabled instructors to have identified those key skills which an individual must have prior to entry into one's selected occupation. Thus, these key (or profile) skills are those which new students may immediately begin to develop. That is, the skills provide a convenient place for the learner to begin.

HOWARD UNIVERSITY

WASHINGTON, D.C.

HOWARD UNIVERSITY

THE CENTER FOR ACADEMIC REINFORCEMENT

Used with permission of Dr. Imogene Robinson

A service Center for Stimulating Increased Competency in the Essential Academic Tools of College Freshman:

VERBAL--MATHEMATICAL--STUDY SKILLS

A Transitional studies Program Compressed-time. Learning
Featuring: MULTI-MODAL, MULTI-MEDIA, MULTI-SENSOR
Diagnostic and Prescriptive Instruction

Purpose and Objectives

The Center for Academic Reinforcement (CAR) is especially designed for entering freshmen in all of the undergraduate schools and colleges who have unrealized potential in verbal, mathematical, and learning/study skills. While recognizing that other factors besides verbal and quantitative skills may contribute to success in college, the CAR, nonetheless, subscribes to the belief that in our symbolic world, the tools of learning are of critical importance to the college student.

The major objectives of the verbal, mathematics, and learning-study skills components are:

- To enhance the student's understanding of the language arts and of the necessity of verbal competency in our culture.

- To review and improve study and reading skills and to coordinate and fuse study and reading skills with content area courses.

- To raise the level of preparation of students by assisting them in the development and mastery of basic conceptual and computational mathematics skills essential to college studies.

- To facilitate the adjustment of the student to the University community and to scholastic requirements and procedures.

- To provide a setting in which the student may explore in depth personal concerns, and be assisted in developing a positive attitude toward academic growth and achievement.

THE PROGRAM AND COURSES OF STUDY

The CAR program consists of a sharply focused, three-way attack to enhance skills in college level studies. This tripartite program involves learning, mathematics, and verbal development under specialists in those discipliines. Planned, systematic instruction in small groups is invariably followed with related, independent laboratory activities.

Course objectives for learning are stated in performance or behavioral terms and are presented in clear anticipation of being used in the student's current academic pursuits.

There is limited access to the regular academic curricula while the student is enrolled in the CAR. A maximum of 3 semester hours and Health & Physical Education may be undertaken along with the three CAR courses. All CAR courses yield three semester hours' credit. When a student has demonstrated his mastery of the exit level criteria, he may undertke a regular academic program.

The Car may be a one-, two-, or three-semester experience. The second and third semesters may vary markedly from the first semester. In these follow-through semesters, which are designed for students who do not attain the required development in the first semester, a student may be required to repeat the entire course or to focus on specific areas not mastered during the first semester.

- Non-credit Mini-courses for upper-classmen, Students-At-Large (referred and voluntary), and University employees.

  Mathematics - Math for Communication Majors

  Study Skills - Speed Reading, Test Taking, Reading Improvement, Study Power/History, Library/Research Skills, Listening and Notetaking, Concentration and Memory.

  Verbal - Vocabulary Development, Communications, Skills/Secretaries, Developing the Composition, Grammar and Usage.
- The Writing Lab: An individual tutorial program in basic writing skills which services student referrals.
- The Math Clinic: A tutorial program designed to provide individual assistance to students with severe mathematical deficiencies.
- Workshops by Request

CAR Collateral Services

The following courses of study and educational services are related to the basic concerns of the CAR and are offered regularly as supplemental services without cost to the University community:

- Non-Credit Mini-Courses for Pre-Professional Students:

  PREP for LSAT - Provides orientation to test content through test-taking techniques.

  GRE PREP - Basic preparation for the GRE. Focus on verbal analogies.

  Academic Skills Development in the Sciences/verbal-Math-Learning - Tailored to science majors and organized into three separate but related topics: conceptual organizations, problem solving and content analysis. All areas of academic support are presented within each topic to develop a broad framework with which to approach the subject matter of the field of study.

FACILITIES

The Center for Academic Reinforcement is located on the first floor of Academic Support Building "B."

The dominant foci of the instructional programs in the learning, mathematics and verbal components are two laboratories. The verbal/study skills and mathematics laboratories are fully equipped with machines, devices, and delivery systems that are audio, visual, and audio-visual for individual and group learning.

Most classrooms and staff offices are readily accessible to the laboratories and thus contribute to the development of the major thrust in the CAR--student increased responsibility for independence in learning.

FACTS ABOUT THE CAR

- The CAR is a University-wide service center established by action of the Howard University Board of Trustees in Spring 1974.

- Originally under the aegis of the College of Liberal Arts, the CAR became an autonomous division of the University in November 1974, and presently renders services to designated students from all of Howard's undergraduate colleges/schools: Allied Health, Architecture, Business, Communications, Education, Engineering, Fine Arts, Human Ecology, Liberal Arts, and Social Work.

- The CAR, however, IS NOT A COLLEGE OR A SCHOOL. The CAR is directly accountable to the Office of the Vice President for Academic Affairs.

- The CAR operates with five components: Verbal, Mathematics, and Learning-Study Skills (instructional); Computer Concepts and Counseling (support). The following courses are taught in the Center: Verbal Skills; Basic Math (Arthmetic) and Basic

Math II (Algebra); and Learning-Study Skills and Reading Comprehension.

- Beginning with summer 1974 (six-week pilot program), and continuing through spring 1984, the CAR has served 9,043 enrolees in its primary program during the ten summers and twenty semesters of its existence.

- In addition to the FTIC (first-time-in-college) target population, the CAR has developed and conducted mini-courses in mathematics, verbal studies and study skills for approximately 3,140 upperclassmen, graduate students, as well as University secretarial and other employees. It has also become popularly know for its services to accommodate even more students in the form of workshops conducted for a number of University programs, and collaborative efforts with the Departments of English and Mathematics, School of Human Ecology, and Graduate Expository Writing Program.*

- The nucleus of the CAR program remains its high-intensity, compressed-time transitional studies in the essential tools of learning for college freshmen who have been conditionally admitted by one of the undergraduate schools or colleges.

- Each undergraduate school or college has its own admissions policy and its own criteria for the identification of its CAR enrolees. The quality of the student's SAT scores in Mathematics and English and/or his secondary school GPA are the principal variables used by the schools and colleges in selecting CAR candidates.

- Students who have been identified for CAR who possess SAT-M amd SAT-V scores at 300 or below are more than twice as likely to earn a grade of U in the three CAR study areas than those who possess at least scores at the 350 level.

- The first group of students serviced by CAR during the fall semester, 1974 (CAR's first real semester) consisted of 232 students. Sixty-four percent survived two years at Howard University. Forty students (seventeen percent) graduated in four years, while twenty-six percent were still enrolled in good academic standing at the end of four years. Eight students were cited in the 1977-78 Who's Who Among Students in Universities and Colleges. Additionally, a number of CAR students are cited each year on the Dean's List (College of Liberal Arts).

- Besides providing services to the University's campus community, the CAR has begun to work with many local high schools, as well as other agencies with an interest in the educational development of youths. Through its Community Outreach Services, the CAR has establisehd partnerships with: the District of Columbia's Model Academic High School (Banneker High); McKinley High through the Adopt-A-School Project of the District; Eastern High School in conjunction with its Health Professions Program;

and the Guidance and Counseling Branch (Student Services Division) of the D.C. Public School System through Project ENRICH, a college awareness program for ninth grade students. Additionally, many one-time workshops have been conducted by the CAR for other schools and local orgainzations.

- The CAR has added to its dimension continuing education courses (workshops). Currently, these workshops are offered in instructional computer usage by the newly-formed Computer Concepts Component. Participants include instructional and administrative personnel of the University and of the D.C. Public School System.*

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*Note: Many of the CAR's community outreach and collateral services have been presently subordinated to comply with the University's current emphasis on basic skills enhancement of the undergraduate popluation.

June 1984

LETHBRIDGE COMMUNITY COLLEGE

LETHBRIDGE, ALBERTA

DEVELOPMENTAL STUDIES – REFERRAL SHEET

Student to present triplicate copies to Jan Sheets Room 2561 K.A.

One copy of this referral sheet will be returned to the instructor to confirm the student's registration in the lab.

DIVISION ______________________ **DATE** ______________________

STUDENT ______________________ **INSTRUCTOR** ______________________

SUBJECT ______________________

TESTS TAKEN:

☐ T.S.W.E.

☐ Nelson Denny – Form E F

☐ Other (please list)

☐ C.A.T. (Total Battery) ____

☐ Reading

☐ Math

☐ Language

____

____

Instructor's estimate of student's level of performance (please circle)

BASIC	INTERMEDIATE	ADVANCED
5 6 7 8 9	10 11 12	College

Select method best suited to student's need:

1. ☐ Diagnosis and remediation to be responsibility of Developmental Studies Staff

2. ☐ a) Diagnostic information to be provided by the course-instructor.

____

____

____

____

b) If desired, instructor-selected materials will be used. Please list below:

____

____

____

____

3. **Evaluation: (check one)**

☐ by course-instructor

☐ by Developmental Studies staff

☐ by course-instructor and Developmental Studies staff

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MOUNT ROYAL COLLEGE

CALGARY, ALBERTA

MOUNT ROYAL
COLLEGE

learning
skills
centre

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WHAT IS THE LEARNING SKILLS CENTRE?

It's a place where students can come to improve their reading, writing, and study skills. Help can take one or more of the following forms:

- small group workshops with one-to-one follow-up;
- one-to-one instruction in the lab;
- peer tutoring (students working with students);
- materials for independent use.

We offer SMALL GROUP WORKSHOPS with INDIVIDUAL follow-up in these areas:

– study skills	(time management, note-taking, text book reading, memory and concentration, exam preparation, exam taking techniques);
– reading skills	(efficient study reading, skimming, scanning, note-taking, study techniques);
– writing skills	(preparing to write assignments, organizing material, basic sentence structure, sentence style, researching, footnoting, revising).

We offer PEER TUTORING. In this program, students who ara strong in a subject area help students who are having difficulties. We have offered this service in the following subject areas:

- Accounting
- Anatomy
- Biology
- Chemistry
- English
- Environmental Quality Control
- Geology
- German
- History
- Linguistics
- Mathematics
- Nursing
- Petroleum
- Philosophy
- Physics
- Political Science
- Psychology
- Rehabilitation
- Social Work
- Spanish

Come to see us if you want to be a tutor or if you want to be tutored.

WHAT DO YOU HAVE TO LOSE? THE SERVICES ARE FREE.

THE LEARNING SKILLS CENTRE is open Monday to Friday, 8:30 - 4:30. It is located on the lower level, adjacent to the English Department and behind the Student Services area. Come to the Centre or phone us (240-6452).

MOUNT ROYAL
COLLEGE

learning
skills
centre

REQUEST FOR TUTOR SERVICE

NAME ______________________________ DATE ____________

ADDRESS ______________________________ PHONE NUMBER ________

PROGRAM ____________________ 1st Year ________ 2nd Year ________

Subject in which you desire tutoring: ______________________
(Give Course Name and Number)

Name of Instructor ______________________

Specific areas of difficulty you wish to work on with a peer tutor:

____

____

* * *

TO THE INSTRUCTOR:

The student noted above has requested peer tutoring assistance in your subject area. Your signature indicates that you believe this student is in need of extra help and will benefit from working with a peer tutor.

Instructor's Signature ______________________ Date ____________

* * *

OFFICE USE:

Tutor Assigned: ______________________

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RED DEER COLLEGE
RED DEER, ALBERTA

LEARNING ASSISTANCE CENTRE

Overview

Learning Assistance Centres offer remedial and developmental educational assistance to all students. Centres help not only the under-prepared students in basic skills, but also assist high achievers to improve their performance. They also serve as a resource area for teaching faculty. The focus of the Learning Assistance Centre's program is primarily in the cognitive domain. Centres may, however, deal with affective aspects of learning to the extent that these influence students' capabilities to accomplish their academic goals. Assistance to the student is usually provided directly by the Centre's staff, or through an appropriate referral within the College or in the community. Centres employ a variety of methods for serving their clientele including individual tutoring, small-group workshops, formal credit and non-credit classes, self-paced study packages, computer assisted instruction, peer tutoring, library materials and other resources. The clientele of an L.A.C. may be voluntary or referred (encouraged) by instructors or counsellors, or mandatory for students with deficiencies. Specialized services may be provided to special need groups such as English as a Second Language students, apprenticeship students, or students with learning disabilities.

Goals

1. To provide leadership in developing learning skills that are necessary for success in post-secondary study.
2. To improve the academic performance of students who are performing at academically successful levels, but who may be capable of doing better.
3. To provide academic support for under-prepared students.
4. To provide direct support to the formal teaching-learning process occurring in the classroom through consultation provided by Centre staff to classroom instructors on matters such as: diagnostic techniques, remediation, materials and references, process interventions, etc.

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5. To help students develop their self concepts as learners.
6. To help students develop their self confidence and reduce fear of failure.
7. To improve human relations and a sense of campus community among students.

Staffing

The Centre shall have a coordinator (or teacher/coordinator) responsible for the management of the Centre. Other staff may include a reading/writing specialist, a mathematics teacher, a clerk-receptionist, part-time tutors, etc. depending upon the scope of the Centre's mandate and the demand for its services. Joint appointments are useful and are frequently used.

The selection of all personnel who work in this area must be made with the knowledge of the special needs of the clientele the area serves. The faculty must be effective teachers who enjoy teaching on a one-to-one basis, who have the personal attributes (patience, empathy, ability to communicate well, etc.) required of a successful L.A.C. teacher. Normally faculty will have formal teaching qualifications, frequently at the Masters level in Education or in a relevant discipline, and have had successful teaching experience.

SENECA COLLEGE
NEWNHAM CAMPUS
SHEPPARD CAMPUS
TORONTO, ONTARIO

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SENECA COLLEGE OF APPLIED ARTS AND TECHNOLOGY

43 SHEPPARD AVENUE EAST, WILLOWDALE, ONTARIO M2N 2Z5 • 491-5050

CENTRE FOR INDEPENDENT LEARNING

GUIDELINES AND INFORMATION

Dear Student

Welcome to the Centre for Independent Learning!

You may have chosen to take a course here for one or more of the following reasons:

- you want more flexibility in deciding when and how you learn
- you work well independently
- you've been away from "school" for some time, and would like to ease back in
- the regular night class you wanted is full or has already begun
- you can't commit yourself to a regular one-night a week class
- you want to work at your own speed toward a certificate or diploma

Whatever the reason for your choice, we'd like to congratulate you for having elected to take more responsibility for your own learning.

As you begin this more or less independent approach to your subject, there are a few things worth knowing about how this experience will differ from other educational approaches you may have been exposed to.

FIRST - you will not be attending classes and jotting down information. Instead, your instructor has organized and structured his/her lecture notes into a Study Guide, which you will purchase when you register. The Study Guide is keyed to a text book, which is the main source of information for the course.

Thus you have the entire course in your hands the day you begin.

SECOND - Many courses have 15 videotapes which highlight the topics covered in the printed material. These tapes have been produced by our faculty, and contain interviews and dramatizations from Vancouver, San Francisco, Calgary, Florida and Ontario.

Thus you have the opportunity to see the inner-workings of a wide variety of businesses and corporations.

THIRD - you will have a Teaching Master who will give you individual attention when you need it.

Thus you have the opportunity to be an active learner, rather than a passive one.

WHAT IS REQUIRED OF YOU IN ORDER TO BE SUCCESSFUL IN YOUR COURSE

1. Sound Time Management:

   You must initiate your learning and sustain it. Careful weekly planning is essential. You are managing your time, not having your time managed by someone else.

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2. Self-discipline

This approach enables you to work at your own pace, but you must determine your own progress and accept the challenge of meeting your objectives.

3. Responsibility

You will be more responsible for your own learning than ever before.

If that sounds tough, take heart. Your Teaching Master will assist you in every way possible to meet the objectives of the course. But he/she can't force you to get down to work, nor do the work for you.

The advantage of taking a course this way is that YOU control when, where and how you study; YOU determine your own pace; YOU consult your Teaching Master when the need arises; YOU write tests and assignments when you feel you're ready.

Other features of Independent Learning

1. Centre for Independent Learning hours of operation:

Monday to Thursday: 8:00 a.m - 9:00 p.m.
Friday: 8:00 a.m. - 5:00 p.m.
Saturday: 9:00 a.m. - 12:00 p.m.

2. Course length: 15 weeks or less from the day you register.

3. Tests and Assignments

They occur at varying intervals in each course. Your Teaching Master will provide you with a suggested schedule for completing them.

Test Centre Hours

Monday - Friday: 9:00 a.m. - 12:00 a.m.
1:00 a.m. - 4:00 p.m.

Tuesdays and Thursdays: 6:00 p.m. - 9:00 p.m.
in addition to the above-mentioned hours.

Test Centre is located in Room 3A08.

4. Teaching Master contact:

Arrange for mutually convenient consultation times.

5. Registration

Register in any course at any time of the year (maximum of 2 subjects at any one time). Finish as quickly as you like.

We hope you will get from your course what you expected and more. And if you don't please let us know.

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EVALUATION PROCEDURES FOR DEVELOPMENTAL / BASIC SKILLS / REMEDIAL PROGRAMS

The following pages contain evaluation procedures suggested by various authors and/or organizations. The sources for the programs are as follows:

X,e,1 - Bray pp. 14-15.

X,e,2 - Arwardy p. 26

X,e,3 - Hollingsworth

  a - pp. 67-77.

  b - pp. 80-81.

  c - pp. 82-84.

EVALUATION OF REMEDIAL PROGRAMS

CHECK LIST
FACTORS INFLUENCING EFFICIENCY AND EFFECTIVENESS

Comprehensiveness:

- Testing information that measures student progress along ability continuum.

- Services currently available.

- Testing programs (screening, placement, and diagnostic).

- Academic areas (reading, writing, mathematics, and language skills) covered in developmental and basic skills programs.

- Use of learning laboratories and audio/visual support.

- Availability of advisory services and staff development for faculty.

- The number of students in developmental versus basic skills programs.

Institutionalization:

- Institutional commitment to remediation.

- Policies currently stated.

- Linkage of remediation to institutional mission to total college programs.

- Statements on competencies.

- Statements on outcomes, long or short duration emphasis.

- Instructional expertise in adult learning.

- Institutional mission.

- Faculty attitudes toward these students.

- Relationship with other tutorial and counseling services.

Retention:

- Persistence rate of students.
- Information available on retention.

- Amount of time spent in developmental studies or basic skills courses before enrolling in college-level curriculum.

- The attrition rate among these students compared to the rest of the freshman class.

Performance:

- Information on student performance in courses after taking developmental education.

- Comparisons of these students with similar students who chose not to take developmental courses.

- Of those students identified, the number who performed poorly in the first-year courses.

- The number of identified students who also were referred to couseling center or other support services.

EVALUATION QUESTIONS

1.1.1 Developmental Courses.

1. How will the Developmental Studies Program be reviewed and revised?
2. What types of instructional activities take place in each of the Developmental Courses?
3. Does study in Developmental Courses result in improved student performance with respect to reading, writing, speech, and mathematics skills?
4. How many students are served by each Developmental Course during the academic year?

1.1.2 Developmental Clinic

1. What types of instruction are provided in each of the Developmental Clinics?
2. Does instruction in the clinics improve student performance?
3. How many students are served by each Developmental Clinic during the academic year?
4. What are the staffing patterns and operating schedules for the clinics?
5. What is the nature of the relationship between Developmental Clinics and Developmental Courses?

1.2 Student Assessment Center

1. How is student profile data collected and maintained?
2. Are fuculty members receiving relevant student data in a timely manner?
3. What types of requests for services are made to the Student Assessment Center?
4. What types of services are actually being provided directly to students?

1.4 Faculty/Staff Development

1. What types of orientation activities were conducted for VSU faculty/staff members?
2. How effective were these orientation activities in making faculty/staff aware of and building support for the program?
3. What types of in-service training activities were conducted for VSU faculty/staff members?
4. Who attended in-service training activities?
5. How effective were the in-service training activities?

BASIC SKILLS / DEVELOPMENTAL EDUCATION SURVEY QUESTIONNAIRE FOR THE DETERMINATION OF EFFECTIVE PRACTICES

An Adaptation of

"An Evaluation Design for Developmental Education" - J.Rodeche,
J. Snow
"Remediation Study Campus Survey" - California Postsecondary
Education Commission 1982

A. Context

1. Name of your college
2. Is your college (1) rural, (2) suburban, or (3) inner city?
3. Approximately how many students are enrolled in basic skills, remediation, developmental skills courses?

   a.less than 2,000
   b.between 2,001 and 6,000
   c.between 6,001 and 10,000
   d.between 10,001 and 15,000
   e.between 15,001 and 20,000
   f.more than 20,000

4. What percentage is the above number of the total student population?
5. Does you college offer a comprehensive basic skills/ developmental education program?
6. How successful have you been in the coordination of the English, math, and developmental education departments with VEA and EOP&S and Student Services?

B. Philosophy

1. Do you agree that 90% of all students can learn at a mastery level what you are teaching if they are given sufficient time and appropriate help?

   agree disagree
   ACTUAL: 4 3 2 1
   agree disagree
   IDEAL: 4 3 2 1

2. Is there a written statement describing your developmental philosophy which is distributed to students?

   good statement none
   ACTUAL: 4 3 2 1
   good statement none
   IDEAL: 4 3 2 1

3. Are there written learning objectives which are distributed to students?

usually never usually never
ACTUAL: 4 3 2 1 IDEAL: 4 3 2 1

C. Rationale

1. Is the developmental remedial program:
   a. To develop academic survival skills, e.g. study skills, reading, writing, memory, etc.

systematically not at all systematically not at all
ACTUAL: 4 3 2 1 IDEAL: 4 3 2 1

   b. To develop the students' self-concept, e.g. self-esteem, confidence, level of aspiration, achievement motivation, etc.

systematically not at all systematically not at all
ACTUAL: 4 3 2 1 IDEAL: 4 3 2 1

   c. To prepare students for regular college work.

systematically not at all systematically not at all
ACTUAL: 4 3 2 1 IDEAL: 4 3 2 1

   d. To develop skills which are related to job and family responsibilities.

systematically not at all systematically not at all
ACTUAL: 4 3 2 1 IDEAL: 4 3 2 1

   e. To improve your present college's response to high-risk students.

systematically not at all systematically not at all
ACTUAL: 4 3 2 1 IDEAL: 4 3 2 1

2. Does your program: (Rank order, using a 1 for the most important, a 2 for the next most important, etc.)

	Actual	Ideal
a. Encourage students to select a transfer program?	______	______
b. Encourage students to select a vocational technical program?	______	______

	Actual	Ideal
c. Encourage students to select a program of study based on their own interests regardless of career opportunities?	____	____
d. Provide little direction as to future plans?	____	____

D. Organizational Structure

1. Which one of hte following descriptions best represents you present developmental studies organizational structure?

   a. The addition of isolated developmental courses in discipline curricula, i.e., adding developmental reading to the list of approved courses in English.

   b. The addition of courses in disciplines which are highly supportive of developmental efforts.

   c. Working with an interdisciplinary group of instructors who remain attached to their disciplines organizationally, but who cooperate with instructors from other disciplines and with counselors attached to these courses.

   d. Establishment of an academic division or department of developmental studies which plans, coordinates and allocates funds for instruction, counseling and other support services.

   e. Establishment of a Learning Resources Center which provides territory, diagnostic asistance and other supportive assistance with academic courses.

   f. Other. (Please specify.)

Learning Assistance Center

2. Does your institution have a Learning Assistance Center?

   ACTUAL: (1) Yes (2) No . IDEAL: (1) Yes (2) No

If so, is it characterized by:	Actual		Ideal	
	Yes	No	Yes	No
a. Instructional Staff				
(1) Full-time professionals	____	____	____	____

	Actual		Ideal	
	Yes	No	Yes	No
(2) Part-time professionals	___	___	___	___
(3) Para-professionals	___	___	___	___
(4) Peer tutors	___	___	___	___
(5) Teaching interns	___	___	___	___
b. Counseling Staff				
(1) Full-time professionals	___	___	___	___
(2) Part-time professionals	___	___	___	___
(3) Para-professionals	___	___	___	___
(4) Peer counselors	___	___	___	___
(5) Counseling interns	___	___	___	___
c. An administrative and budgetary relationship to:				
(1) Academic services	___	___	___	___
(2) Student services	___	___	___	___

Additional Support Services

3. Does your college have a media production center?	___	___	___	___
4. Does your college provide audio-visual support?	___	___	___	___
5. Does your college have a day care center?	___	___	___	___
a. Is it a lab school for a child developmental program?	___	___	___	___
b. Is it open during the evening?	___	___	___	___

E. Staffing

1. How effective are your instructors in causing learning in high-risk students?

good poor good poor
ACTUAL: 4 3 2 1 IDEAL: 4 3 2 1

2. Do you have any special instructional or training programs to assist your faculty to work with high-risk students?

3. Are counselors attached to developmental courses or programs?

4. Are counselors provided any special instructional or training programs to assist them in working with high-risk students?

5. How effective are your regular counselors in developing the potential of high-risk students?

	good			poor		good			poor
ACTUAL:	4	3	2	1	IDEAL:	4	3	2	1

6. How effective are your tutors in assisting high-risk students with their academic work?

	good			poor		good			poor
ACTUAL:	4	3	2	1	IDEAL:	4	3	2	1

F. Admissions and Placement of Students

1. For new students attending your college for the first time, what records do you require? (Check the appropriate blank.)

	Actual	Ideal
a. Transcripts of previous educational experiences	______	______
b. Test scores	______	______
c. Demographic data sheet	______	______
d. Valid identification	______	______
e. Other. (Please specify.)	______	______

2. Please rank the following placement methods you use in placing students into developmental courses or programs. (Rank order, using 1 for the most important and 2 for the next most important, etc.)

	Actual	Ideal
a. Student self-referral	______	______
b. Testing	______	______
c. Previous educational record	______	______

d. Counseling ______ ______

e. Teacher referral ______ ______

f. Other (Please specify.) ______ ______

3. Do you offer diagnostic testing or assessment services?

ACTUAL: (1) Yes (2) No IDEAL: (1) Yes (2) No

a. Are they required for admission?

ACTUAL: (1) Yes (2) No IDEAL: (1) Yes (2) No

4. What tests do you commonly use for diagnostic placement purposes? (Rank according to frequency used.)

	Actual	Ideal
a. A.C.T.	______	______
b. S.A.T.	______	______
c. Nelson Denny Reading Test	______	______
d. Stanford Achievement Test	______	______
e. McGraw Hill Series	______	______
f. Comparative Guidance and Placement Test	______	______
g. A Self-Concept Test	______	______
h. A personality test	______	______
i. Locally designed tests	______	______
j. Other (Please specify)	______	______
k. Stanford-TASK-Test of Academic Skills	______	______

5. Are your developmental courses mandatory?

ACTUAL: (1) Yes (2) No IDEAL: (1) Yes (2) No

6. Are your developmental courses optional?

ACTUAL: (1) Yes (2) No IDEAL: (1) Yes (2) No

G. Instruction

	Actual		Ideal	
	Yes	No	Yes	No
1. Are your developmental remedial courses characterized by:				
a. Non-credit	___	___	___	___
b. Nondegree credit	___	___	___	___
c. Degree credit	___	___	___	___
d. Full term in length	___	___	___	___
e. Less than full term	___	___	___	___
2. Are your developmental remedial practices characterized by:				
a. Providing students with course goals and objectives at the beginning of term?	___	___	___	___
b. Providing at least two alternative learning activities for each learning objective?	___	___	___	___
c. Providing a variety of assessment methods?	___	___	___	___
d. Test items which are developed from prestated objectives?	___	___	___	___
e. Information is gathered on the students' opinion of the methods employed in the course which is used in revising instructional activities.	___	___	___	___
f. Students are allowed to restudy unmastered source objectives and retake tests to attain mastery.	___	___	___	___
3. Do high-risk students carry a lighter academic load than "traditional" students?	___	___	___	___
4. Is there an attempt made by your college to promote non-punitive grading, i.e., IP = In Progress?	___	___	___	___
5. Are developmental remedial courses smaller than regular courses?	___	___	___	___

H. Evaluation

	Actual		Ideal	
	Yes	No	Yes	No
1. Does your college evaluate developmental courses or programs in a systematic manner?	___	___	___	___
2. Does your evaluation system utilize:				
a. Retention attrition records	___	___	___	___
b. Analysis of grade point averages	___	___	___	___
c. Follow-up records, e.g. grades in non-remedial courses, success in job or transfer, etc.	___	___	___	___
d. Attitudinal measures, e.g. O.P.I., local tests, etc.	___	___	___	___
e. Self-concept measures, e.g. Locus of Control scales, i.e. Tennessee Self-Concept Test, etc.	___	___	___	___
f. Student perceptions of the college, e.g. Student Reaction to College, local tests, etc.	___	___	___	___
g. Pre-, post-tests	___	___	___	___
h. Control or contrast groups	___	___	___	___
i. Comparison of achievements to pre-stated program objectives.	___	___	___	___
3. Who does the evaluating of your developmental/remedial programs or courses?	___	___	___	___
a. Faculty	___	___	___	___
b. Academic Dean	___	___	___	___
c. Director of Institutional Research	___	___	___	___
d. Director of Developmental Studies	___	___	___	___
e. Students in remedial programs	___	___	___	___
f. Other college personnel	___	___	___	___
g. Outside evaluator	___	___	___	___

4. Approximately what proportion of the full-time student body is enrolled in developmental courses?	Actual	Ideal
a. Less than 10 percent	______	______
b. Between 10 and 20 percent	______	______
c. Between 20 and 30 percent	______	______
d. Between 30 and 40 percent	______	______
e. Between 40 and 50 percent	______	______
f. More than 50 percent	______	______
5. How many of these students who begin these courses or the program successfully complete it?		
a. More than 90 percent	______	______
b. Between 80 and 90 percent	______	______
c. Between 70 and 80 percent	______	______
d. Between 60 and 70 percent	______	______
e. Between 50 and 60 percent	______	______
f. Between 40 and 50 percent	______	______
g. Less than 40 percent	______	______
6. How many persist to the second semester in the program or in regular courses?		
a. More than 90 percent	______	______
b. Between 80 and 90 percent	______	______
c. Between 70 and 80 percent	______	______
d. Between 60 and 70 percent	______	______
e. Between 50 and 60 percent	______	______
f. Between 40 and 50 percent	______	______
g. Less than 40 percent	______	______

7. How many persist to the third semester in the program or in regular courses?

	Actual	Ideal
a. More than 90 percent		
b. Between 80 and 90 percent		
c. Between 70 and 80 percent		
d. Between 60 and 70 percent		
e. Between 50 and 60 percent		
f. Between 40 and 50 percent		
g. Less than 40 percent		

8. How many complete on a degree or certificate program?

a. More than 90 percent		
b. Between 80 and 90 percent		
c. Between 70 and 80 percent		
d. Between 60 and 70 percent		
e. Between 50 and 60 percent		
f. Between 40 and 50 percent		
g. Less than 40 percent		

9. How many, of those who did not complete a degree or certificate, transferred to another college or met their own educational objectives?

a. More than 90 percent		
b. Between 80 and 90 percent		
c. Between 70 and 80 percent		
d. Between 60 and 70 percent		
e. Between 50 and 60 percent		
f. Between 40 and 50 percent		
g. Less than 40 percent		

10. In your opinion how successful is your developmental/remedial program?

	good			poor		good			poor
ACTUAL:	4	3	2	1	IDEAL:	4	3	2	1

Course Characteristics

11. What percentage of remedial course sections were offered during academic year 1981-82 by the following types of administrative units on your campus?

	English or Mathematics Department	Other Academic Departments	Learning Assistance/ Skills Centers	Other Units	Total
Reading	____%	____%	____%	____%	100%
Writing	____%	____%	____%	____%	100%
Mathematics	____%	____%	____%	____%	100%
ESL	____%	____%	____%	____%	100%

Costs

12. Please indicate the amount of your institutional budget, excluding capital outlay, expended by your institution on remedial courses and remedial support services for academic years 1978-79, 1979-80, and 1980-81. Include salaries, benefits, administrative costs, materials, and equipment charges in your figures.

	Academic Year 1978-79	Academic Year 1979-80	Academic Year 1980-81
Total Institutional Budget (operating budget exclusive of capital outlay)	$__________	$__________	$__________
Remedial Courses:			
Reading	$__________	$__________	$__________
Writing	$__________	$__________	$__________
Mathematics	$__________	$__________	$__________

	Academic Year 1978-79	Academic Year 1979-80	Academic Year 1980-81
ESL	$__________	$__________	$__________
Subtotal	$__________	$__________	$__________*
Remedial Support Services	$__________	$__________	$__________**
Total Remediation Expenditures	$__________	$__________	$_________***

(Asterisked figures should agree with figures in Question 12a.)

12a. Please indicate the funding sources for your expenditures on remediation activities during academic year 1980-81. (Community colleges should include local property tax revenue under State category.)

Sources of Funding	Remedial Courses	Remedial Support Services	Total
Federal	$________	$________	$________
State	$________	$________	$________
Special/Institutional	$________	$________	$________
Student Fees	$________	$________	$________
Direct Assessment (class fees)	$________	$________	$________
Grants	$________	$________	$________
Other	$________	$________	$________
Total	$______*	$______**	$______***

(Asterisked figures should agree with figures in Question 12.)

from:
Developmental Skills and Learning Assistance Support Services
Gwyn Enright Office of Instruction East Los Angeles College 1981

A more logically organized evaluation scheme is the following check list which represents a distillation from two evaluation institutes conducted for learning assistance centers directors (Clymer-Walvekar, in press). The LASS evaluation could include appropriate combinations of the following points:

1.0 Program Administration

- 1.1 Goals of program reflective of instructional goals
- 1.2 Goals of program reflective of department goals
- 1.3 Overall goals and specific objectives (timing, scheduling, services) matched to needs of student population to be served
- 1.4 Cost effectiveness of program
- 1.5 Organization of program
- 1.6 Organization of staff
- 1.7 Staff selection
- 1.8 Staff supervision
- 1.9 Staff communication channels

2.0 Personnel

- 2.1 Ongoing training
- 2.2 Communication skills
- 2.3 Interpersonal skills
- 2.4 Professional development
- 2.5 Interaction with faculty/staff
- 2.6 Interaction with other inhouse staff
- 2.7 Impact on students
- 2.8 Delivery techniques/style
- 2.9 Time management

3.0 Materials

- 3.1 Variety of materials appropriate for client's needs and program goals
- 3.2 Appropriate sequence of materials
- 3.3 Appropriate selection of materials for client's diagnosed affective and cognitive needs
- 3.4 Appropriate selection for client's preferences
- 3.5 Staff developed materials

4.0 Instruction

- 4.1 Individualized delivery method
- 4.2 Self-paced delivery method
- 4.3 Small group delivery method
- 4.4 Large group delivery method
- 4.5 Tutorial delivery method
- 4.6 Competency based delivery method
- 4.7 Norm based delivery method
- 4.8 Appropriate selection of method for clients' varied learning styles
- 4.9 Appropriateness of scheduling

5.0 Clients

- 5.1 Determination of goals
- 5.2 Assessment of skill needs
- 5.3 Assessment of personal needs
- 5.4 Assessment of learning style
- 5.5 Assessment of attitude
- 5.6 Change in learning behavior
- 5.7 Change in skills
- 5.8 Change in attitude
- 5.9 Change in academic record
- 5.10 Change of expectations
- 5.11 Long range effectiveness of change
- 5.12 Accomplishment of goals
- 5.13 Utility of change
- 5.14 Transfer of changes to other courses
- 5.15 Transfer of changes to job skills
- 5.16 Transfer of changes to life skills

6.0 Learning Environment

- 6.1 Physical arrangement of facility
- 6.2 Accessability of facility/location
- 6.3 Accessability of facility/hours open
- 6.4 Pleasant and positive learning environment within facility

7.0 Out of House

- 7.1 Needs assessment
- 7.2 PR/Advertising
- 7.3 Programs/Services
- 7.4 Referral
- 7.5 Political support

Summative evaluation

The last section of the Clymer-Walvekar evaluation checklist addresses summative evaluation concerns:
8.0 Overall Effectiveness of Program

8.1 Documentation
8.2 Methods of data collection
8.3 Achievement of goals
8.4 Revision after evaluation

from:
Improving Student Learning Skills
Martha Maxwell Jossey-Bass San Francisco 1979.

PURPOSES AND GENERAL METHODS OF PROGRAM EVALUATION

Likely investigation method

- I. To contribute to decisions about program installation
  - A. Need
    - 1. Frequency
      - a. Student
      - b. Society
      - c. Other (for example, industrial, professional, governmental)
    - 2. Intensity
      - a. Student
      - b. Society
      - c. Other
  - B. Program conception
    - 1. Appropriateness
    - 2. Quality
    - 3. Priority in the face of competing needs
  - C. Estimated cost
    - 1. Absolute cost
    - 2. Cost in relation to alternative strategies oriented toward same need
  - D. Operational feasibility
    - 1. Staff
    - 2. Materials
    - 3. Facilities
    - 4. Schedule
  - E. Projection of demand and support
    - 1. Popular
    - 2. Political/financial
    - 3. Professional

- II. To contribute to decisions about program continuation, expansion, and/or "accreditation".
  - A. Continuing need
    - 1. Frequency
      - a. Student
      - b. Society
      - c. Other
  - B. Global effectiveness in meeting need
    - 1. Short-term
    - 2. Long-term
  - C. Minimal negative side effects
  - D. Important positive side effects
  - E. Cost
    - 1. Absolute cost
    - 2. Cost in relation to alternative strategies oriented toward same need
    - 3. Cost in relation to benefits

F. Demand and support
    1. Popular
    2. Political/financial
    3. Professional

III. To contribute to decisions about program modification
  A. Program objectives
    1. Validity and utility (in meeting needs)
    2. Popular acceptance
    3. Professional acceptance
    4. Student acceptance
    5. Instructor acceptance
  B. Curriculum content
    1. Relevance to program objectives
    2. Coverage of objectives
    3. Technical accuracy
    4. Degree of structure
    5. Relevance to backgrounds of students
    6. Effectiveness of components
    7. Sequencing of components
    8. Difficulty
    9. Popular acceptance
    10. Professional acceptance
    11. Student acceptance
    12. Instructor acceptance
  C. Instructional methodology
    1. Degree of student autonomy
    2. Effectiveness of presentation methods
    3. Pacing and length
    4. Reinforcement system
    5. Student acceptance
    6. Instructor acceptance
  D. Program context
    1. Administrative structure auspices
    2. Program administration procedures
    3. Staff roles and relationships
    4. Public relations efforts
    5. Physical facilitis and plant
    6. Fiscal sources and stability
    7. Fiscal administration procedures
  E. Personnel policies and practices
    1. Students
      a. Recruitment
      b. Selection and placement
      c. Evaluation
      d. Discipline
      e. Retention
    2. Instructors
      a. Selection and placement
      b. In-service training
      c. Evaluation for promotion, guidance, retention, etc.

- 3. Administrators
    - a. Selection
    - b. Evaluation for promotion, retention, etc.

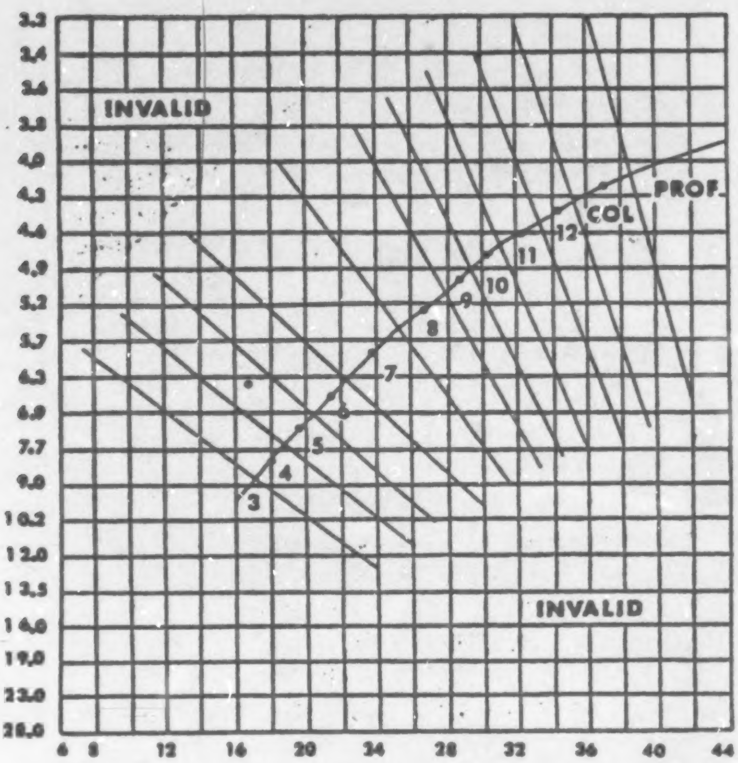
IV. To obtain evidence favoring program to rally support
- A. Popular
- B. Political/financial
- C. Professional

V. To obtain evidence against program to rally opposition
- A. Popular
- B. Political/financial
- C. Professional

VI. To contribute to the understanding of basic processes
- A. Educational
- B. Psychological
- C. Social
- D. Economic
- E. Evaluaiton (Methodology)

RAYGOR READABILITY ESTIMATE

RAYGOR READABILITY ESTIMATE



Directions:

Count out three 100-word passages at the beginning, middle, and end of a selection or book. Count proper nouns, but not numerals.

1. Count sentences in each passage, estimating to nearest tenth.
2. Count words with six or more letters.
3. Average the sentence length and word length over the three samples and plot the average on the graph.

Example:

	Sentences	6+ Words
A	6.0	15
B	6.8	19
C	6.4	17
Total	19.2	51
Average	6.4	17

Note mark on graph. Grade level is about 5.

REFERENCE: Alton L. Raygor (Minneapolis, Minnesota: University of Minnesota); 192 Pillsbury Drive SE, Minneapolis, Minnesota 55455.

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Proposed Capital Budget for Learning Skills Centre

		Description	Year 1	Year 2	Year 3
N	30	Study Carrels @ $500.00 each	10 - $5,000.00	10 - $5,000.00	10 - $5,000.00
N	8	Computers	$11,000.00	$5,500.00	$5,500.00
		Apples - 6 IBM PC - 2	3 1	1 1	1 1
N	6	Video's @ $2,000.00 each	4 - $8,000.00	1 - $2,000.00	1 - $2,000.00
		Price includes both monitors and recorders			
N	1	Video Writing Program	$3,600.00		
N	1	Overhead Projector	$550.00		
N	2	Rear Screen Slide Projector @ $1,100 each	1 - $1,100.00	1 - $1,100.00	
N	1	Laser Disc		$1,600.00	
N	2	IBM III Electronic Typewriter @ $1,600.00 each	1 - $1,600.00	1 - $1,600.00	
N	1	Steno Desk Runoff	$600.00		
N	2	Single Pedestal Executive Desks @ $600.00	2 - $1,200.00		
N	3	Double Pedestal Desks @ $600.00 each	1 - $600.00	1 - $600.00	1 - $600.00
N	10	Legal - 4 drawer filing cabinets @ $600.00 each	6 - $3,600.00	2 - $1,200.00	2 - $1,200.00
N	1	V.T. Terminal		$2,000.00	
N	1	PC 20 Photocopier	$1,500.00		
N	1	Wall mounted single faced adjustable shelving	$10,000.00		
N	1	Magazine display shelving	$1,000.00		
		SUB TOTAL:	$49,300.00	$20,600.00	$14,000.00

STAFF RECOMMENDATIONS

1ST YEAR:	1 full-time Academic Instructor (Reading, Writing, Study Skills)
	2 full-time Instructional Assistants (1 - Math background, 1 - Reading, Writing, ESL background)
	1 Secretary/Receptionist (Clerk-Steno)
2ND YEAR:	1 full-time Academic Instructor (Math background)
3RD YEAR:	1 full-time Academic Instructor (Writing/ESL background)
4TH YEAR:	1 full-time Academic Instructor (Learning Disabled Diagnostic Teaching background)

LEARNING SKILL CENTRE SPACE REQUIREMENTS

Space requirements for twenty to twenty two students:
    - approximately 800 square feet

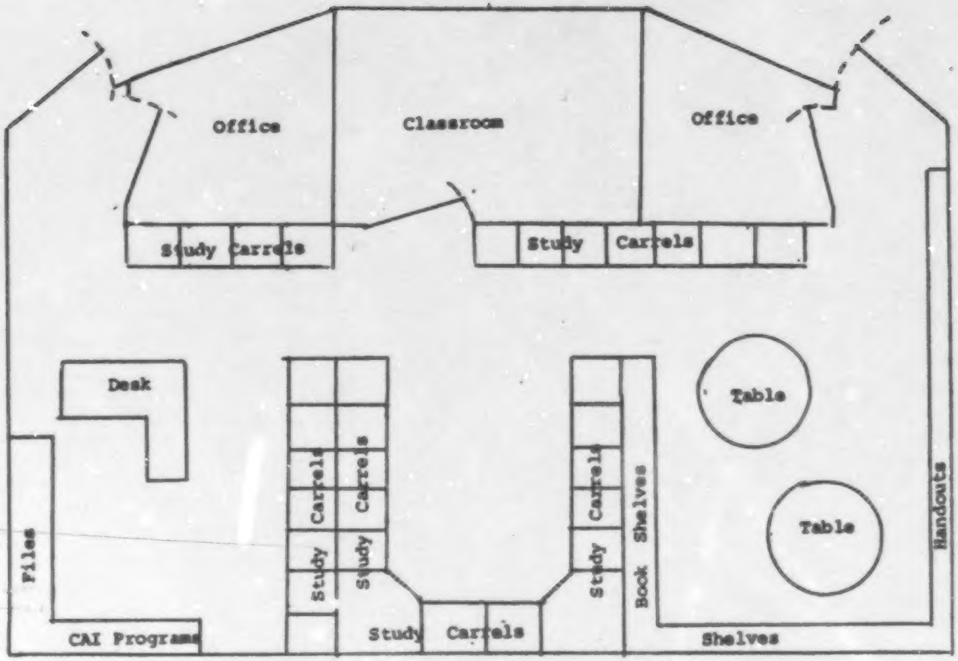
Space required per office:
    - approximately 90 to 100 square feet

Space required for secretarial/reception area:
    - approximately 150 square feet

Space required for small group meeting room:
    - approximately 120 square feet

Minimum space requirements: 960 square feet

* Examples of learning skills centre floor plans are given in the next three pages.


Office
Classroom
Office
Study Carrels
Study Carrels
Desk
Table
Table
Study Carrels
Study Carrels
Study Carrels
Book Shelves
Handouts
Files
CAI Programs
Study Carrels
Shelves

Appriximately 24' x 40'

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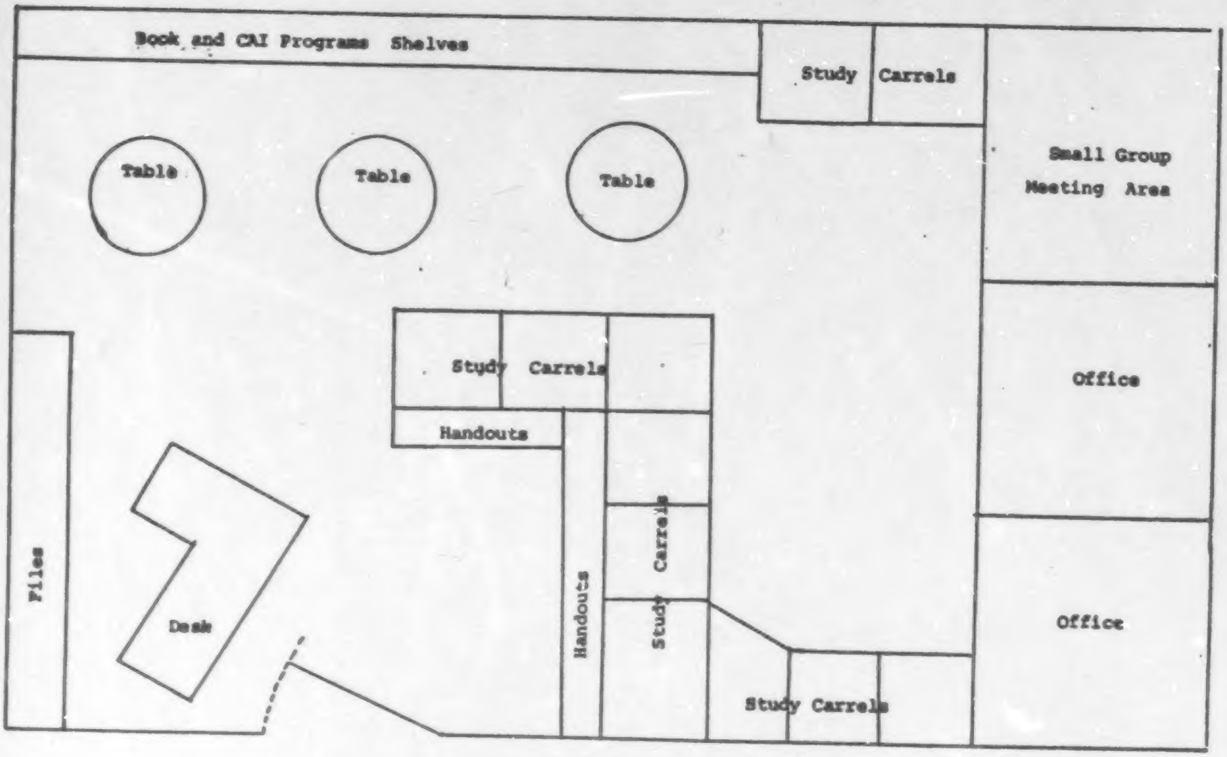
Book and CAI Programs Shelves
Study Carrels
Small Group Meeting Area
Table
Table
Table
Study Carrels
Office
Handouts
Files
Desk
Handouts
Study Carrels
Office
Study Carrels

Approximately 30' x 40"

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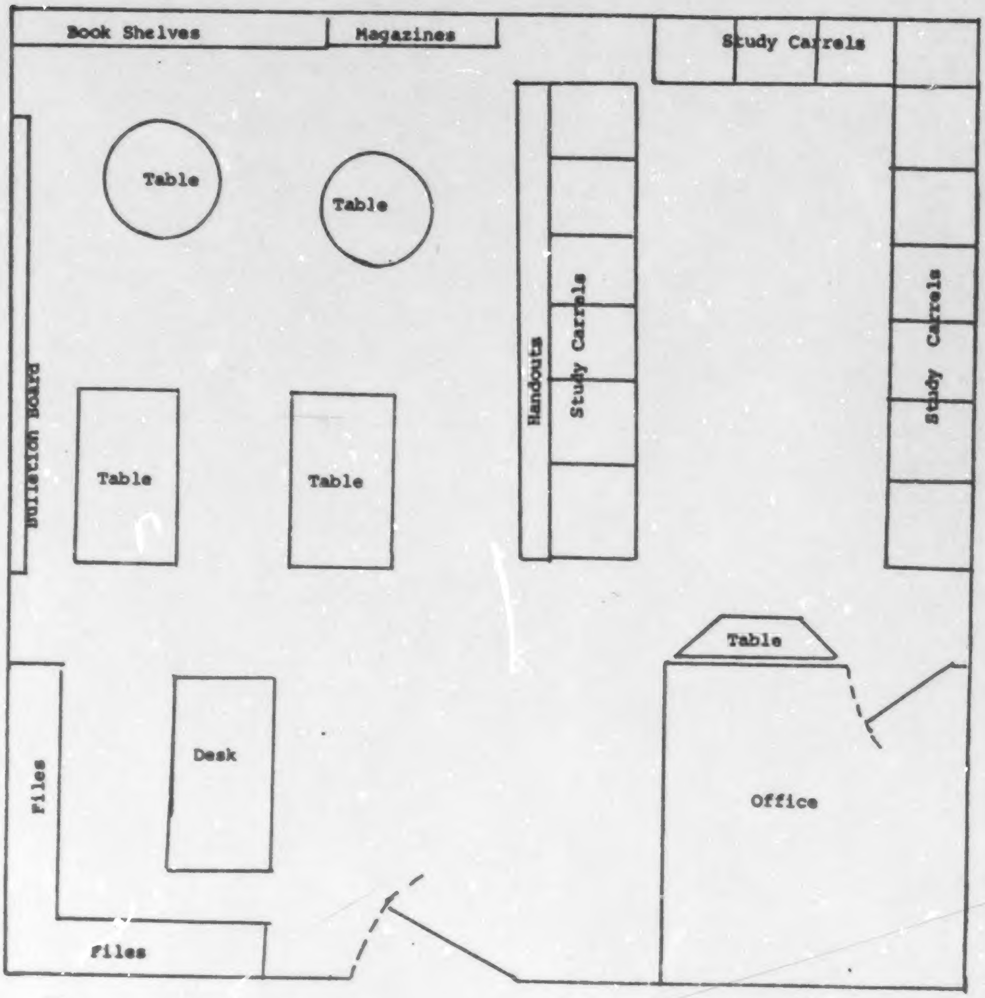
Book Shelves
Magazines
Study Carrels
Table
Table
Bulletin Board
Handouts
Study Carrels
Study Carrels
Table
Table
Table
Files
Desk
Office
Files

Approximately 28' x 32'

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